

BEFORE THE
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

FIRST-CLASS MAIL AND PERIODICALS
SERVICE STANDARD CHANGES, 2021

Docket No. N2021-1

**NOTICE OF DESIGNATED MATERIALS FOR UNITED STATES POSTAL
SERVICE WITNESS HAGENSTEIN**
(June 7, 2021)

Pursuant to the Presiding Officer's Ruling No. N2021-1/11 (May 25, 2021), the United States Postal Service hereby provides this Notice of Designated Materials for Postal Service witness Stephen Hagenstein. As required by the ruling, attached to this notice are: (i) the testimony of witness Hagenstein; (ii) an index of library references sponsored by witness Hagenstein; and (iii) the designated responses of witness Hagenstein (with corrections highlighted) in alphabetical order by party name and by numerical order of request.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

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DIRECT TESTIMONY OF
STEPHEN B. HAGENSTEIN
ON BEHALF OF THE
UNITED STATES POSTAL SERVICE

(USPS-T-3)

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AUTOBIOGRAPHICAL SKETCH

My name is Stephen Hagenstein. Since February 2020, I have served as Director, Logistics Modeling and Analytics at the United States Postal Service.

My office is responsible for providing analytics and insights to help the organization review scenarios, plan for future needs, and make strategic decisions. My team directly supports Surface Logistics, Air Transportation Operations, Processing Operations, and strategic teams.

I began my career with the Postal Service in 2004 as a Field Industrial Engineer where my responsibilities included implementing automation and mechanization equipment in a mail processing facility; forecasting volumes and scheduling processing equipment; and analyzing processes and recommending changes to improve efficiency.

In 2007, I was promoted to Area Operations Industrial Engineer. In this position, I served as the Material Handling and Processing Equipment Coordinator. In that role, my responsibilities included developing and reviewing material handling project requests and business cases. I also analyzed and managed equipment utilization through scheduling and reallocation of resources throughout the region. In that position I also led process improvement teams, and identified, analyzed, and reported key performance indicators to drive process improvement behaviors.

My next position with the Postal Service was as a Lead Operations Industrial Engineer beginning in 2011. As a Lead Operations Industrial Engineer, I played a key role in the planning and implementation of facility consolidations

1 and restructuring, involving over 60 Processing and Distribution facilities in ten
2 states. I also strategized with Postal Service senior management to develop
3 service and productivity performance improvement programs, and coordinated
4 staffing modeling to determine the authorized complements in Processing and
5 Distribution Centers.

6 In 2018, immediately prior to assuming my current position, I was
7 promoted to Plant Manager at the 315,000 square foot Pennwood Place,
8 Pennsylvania Processing & Distribution Center, located just outside of Pittsburgh,
9 Pennsylvania, with 470 employees, serving Western Pennsylvania, Ohio, and
10 West Virginia. In this role I was directly responsible for all operations, including
11 processing and distribution, facility and equipment maintenance, and
12 transportation. I was also in charge of implementing a process to track and
13 improve on-time trip departures, and a scanning visibility analysis and tracking
14 process to improve container and bundle visibility.

15 Prior to joining the Postal Service, I worked as an Industrial Engineer for
16 Thomas G. Faria Corporation from 2003 to 2004. In that role, I implemented
17 Lean manufacturing principles, reducing inventory levels and improving
18 production line efficiency; I also coordinated and balanced production lines and
19 work-cells using time studies, among other duties.

20 I am a graduate of the University of Rhode Island's International
21 Engineering Program, from which I earned a Bachelor of Arts in French and a
22 Bachelor of Science in Industrial and Manufacturing Engineering.

23

PURPOSE OF TESTIMONY

The purpose of my testimony is to provide an overview of the current transportation network and the modeling methodology used to evaluate the effects of the Postal Service's First-Class Mail and Periodicals Service Standard Changes to accommodate greater use of surface transportation in the network for First-Class Mail (FCM) letters and flats and end-to-end Periodicals in the contiguous 48 states, as a result of its proposed plan to change service standards for FCM and end-to-end Periodicals. My testimony, as demonstrated via the models described below, explains how the proposed service standard changes under review in this docket will enable the Postal Service to increase efficiency in the transportation network and lower unit transportation costs, while also enhancing service capability.

1 **ASSOCIATED LIBRARY REFERENCES**

2 I sponsor the following USPS Library References that are associated with
3 my testimony: USPS-LR-N2021-1-1 through USPS-LR-N2021-1-3. I also am
4 sponsoring the following non-public USPS Library Reference associated with my
5 testimony: USPS-LR-N2021-1-NP1.

1 **I. BACKGROUND**

2 For decades, the Postal Service shaped its transportation network to
3 accommodate significant mail volume growth, augmented to support the
4 movement of increased mail volume among and between processing facilities
5 and delivery offices. To comport with current economic realities and the
6 continuing reduction in mail volume over the past decade, however, the Postal
7 Service must adapt its transportation network in a different manner. As the
8 employed models demonstrate, the changes proposed in this docket will provide
9 the Postal Service with flexibility to increase efficiency in its transportation
10 network and reduce transportation costs, while enhancing the reliability of the
11 service that is provided.

12 My testimony begins with an overview of the structure of the transportation
13 network here in Section I. In Section II, I explain the process utilized to analyze
14 the effects of the proposed service changes on the transportation network. This
15 includes an explanation of the modeler, assumptions, constraints and limitations,
16 inputs, and refinements. Finally, I explain the results of the model in Section III.

17 **A. The Structure of the Transportation Network**

18 The transportation network must provide for safe, efficient, and timely
19 movement of mail among postal processing facilities and between processing
20 facilities and delivery offices. The size of the transportation network is dependent
21 upon the size of the processing and distribution network and the need to move
22 mail to and from Processing and Distribution Centers, International Service
23 Centers, Network Distribution Centers, Distribution Delivery Units, annexes,

1 airports, Post Offices, stations, and branches. To illustrate, when mail volumes
2 were increasing between 1993 and 2006, the Postal Service added processing
3 and distribution facilities to the processing network, thereby accommodating both
4 higher volumes and the space necessary for additional mail processing
5 equipment. As a result, the Postal Service also needed to augment the
6 transportation network to move mail between these additional facilities.

7 The transportation network must be designed to ensure that mail volumes
8 can be transported between postal facilities within certain transportation windows
9 so that the mail can be processed and delivered in accordance with the
10 applicable processing windows and service standards. A “transportation window”
11 is the time period between the “clearance time” set by the origin processing plant
12 and the “critical entry time” established by the destination processing plant. The
13 clearance time (CT) is the time when the outgoing operations is completed at the
14 origin. This time is used to establish the volume availability time, or earliest
15 departure time at the origin. The Critical Entry Time (CET) is the latest time an
16 operation or facility can accept volume without impacting the operating plan, or
17 ability to successfully process the volume in a timely manner. The CTs and
18 CETs set by the processing facilities and the distance between those postal
19 facilities inform Postal Service decisions regarding the transportation mode(s)
20 necessary to move respective classes of mail between those facilities.

21 **B. Modes of Transportation**

22 The primary transportation modes used by the Postal Service are surface
23 and air. FCM, Priority Mail, and Priority Mail Express intended for carriage and

1 delivery within the continental United States and between the contiguous United
2 States and non-contiguous parts of the domestic service area are transported via
3 air when necessary to achieve the applicable service standards. In contrast,
4 Periodicals, USPS Marketing Mail, and Retail Ground are transported exclusively
5 by surface within the contiguous United States because: (1) the applicable
6 service standards generally provide more time for the delivery of these mail
7 classes; and (2) surface transportation modes are typically less expensive than
8 air transportation modes. Additionally, Periodicals, USPS Marketing Mail, and
9 Retail Ground are transported by boat to reach non-contiguous states and
10 territories.

11 **1. Surface Transportation**

12 The service changes under review in this docket will have direct
13 implications for the surface and air transportation networks. Surface
14 transportation is provided by (1) the Postal Vehicle Service (PVS), which is
15 comprised of drivers who are USPS employees; or (2) Highway Contract Route
16 (HCR) service providers. Air transportation is provided by third-party service
17 providers.

18 i. Postal Vehicle Service

19 Network transportation using Postal Service vehicles and employees is
20 called PVS. The functional responsibility of PVS is to transport large containers
21 of mail between mail processing facilities, and to and from airports, Post Offices,
22 stations, and branches. PVS drivers also provide services such as plant load
23 pick-up. In general, PVS does not provide service to mail processing plants and

1 retail locations that are designated for HCR service. PVS operations encompass
2 drivers, vehicles, and administrative support such as supervisors and clerks.
3 PVS transportation to Post Offices, stations, and branches will not be impacted
4 by the proposed service changes under review in this docket.

5 ii. Highway Contract Route Service

6 HCR service transports all mail classes throughout the postal network and
7 is the primary provider for long-haul surface transportation. On average, HCR
8 transportation is less expensive than PVS. HCR service is contracted where
9 PVS is absent.

10 iii. Short- and Long-Haul Transportation Networks

11 The surface network is segmented into two broad categories: the short-
12 haul network and the long-haul network. “Short-haul network” generally refers to
13 the transportation network that connects postal facilities that are less than 300
14 miles apart. The purpose of the short-haul network is to ensure timely
15 transportation of mail subject to two-day service standards. The transportation of
16 mail over short-haul networks may be provided by both PVS drivers or HCR
17 providers.

18 “Long-haul network” refers to transportation by HCR providers that
19 connects postal facilities more than 300 miles apart. Long-haul network
20 transportation may entail “direct” trips between origin and destination facilities or
21 “indirect” trips whereby a truck stops at a consolidation truck terminal or hub
22 before continuing on to its destination. At a terminal or hub, a truck is filled with
23 additional mail intended for transport to the destination facility. Generally, a truck

1 run that is routinely less than 60 percent full is directed to a consolidation facility
2 so that the Postal Service can take full advantage of the truck's carrying capacity.
3 However, in some circumstances, that is not possible because CETs or service
4 standards dictate a direct trip.

5 **2. Air Transportation**

6 The Postal Service uses air transportation (*i.e.*, passenger and cargo
7 planes) to transport certain FCM, Priority Mail, and Priority Mail Express volumes
8 between processing plants to ensure that such mail can be processed and
9 delivered in accordance with applicable service standards. To select the optimal
10 service provider, the Postal Service considers factors such as the service
11 standards for the mail being transported, security requirements, contract terms
12 (*e.g.*, weight and volume restrictions), price, and capacity. The Postal Service
13 also contracts with third-party terminal handling suppliers which act as
14 intermediaries between the Postal Service and the air transportation provider.
15 These terminal handling suppliers prepare mail for air transport and receive mail
16 from the air transportation provider for transfer to the Postal Service. As the
17 proposed service standard changes under review in this docket extend the
18 transportation window, a significant portion of FCM volume currently traveling by
19 air would be diverted to surface transportation.

20 **C. Challenges within the Transportation Network**

21 Under the current service standards, both over- and under-utilized trips
22 across the transportation network lack flexibility. Routing existing trips through
23 consolidation points to increase utilization and decrease trips remains infeasible

1 between many lanes because doing so requires an amount of time that is not
2 available in the current transportation window.

3 Additionally, declining mail volume, which has resulted in changes in
4 volume distribution across the network, has, over time, created an unbalanced
5 transportation system. This had led to less efficient direct transportation of mail.
6 Furthermore, differing CETs for FCM and packages, leading to separate
7 networks for separate products, has reduced utilization efficiency.

8 **II. PROCESS UTILIZED TO ANALYZE TRANSPORTATION CHANGES**

9 This portion of my testimony describes the evaluation of how the proposed
10 service standard modification allows for additional transport time and increased
11 efficiencies across the network for FCM and end-to-end Periodicals. Adding one
12 to two days to the service standard between certain origin Processing &
13 Distribution Center or Facilities (P&DCF), destination Area Distribution Centers
14 ADC), and destination Sectional Center Facilities (SCF) pairs (OD Pairs) will
15 enable the percentage of First-Class Mail volume transported via surface to
16 increase from approximately 79 percent to 88 percent.¹

17 **A. Overview**

18 My analysis quantifies the potential shift of mail volume from the air
19 network to the surface network, the impact to the surface network from the
20 additional diverted volume, and the routing efficiencies gained to the existing
21 surface network due to the increased transportation window. The network

¹ Section III below discusses the modeling results that led to this conclusion.

1 scenarios were modeled using logistics industry optimization software, Blue
2 Yonder[®] Transportation Modeler (TMOD).²

3 The service standard changes reviewed in this docket will impact both OD
4 Pairs that are currently served by surface transportation and those currently
5 served by air transportation. Due to the impact to the current surface network
6 and the introduction of new OD Pairs to the surface network, the modeling was
7 an iterative process to maximize network efficiencies and ensure accurate
8 comparative analysis of results. The iterative process first created a model to
9 optimize the current surface pairs, then introduced current air OD Pairs into the
10 model, and finally analyzed cost effectiveness of the model's routing results for
11 current air OD Pairs.

12 The first iteration uses TMOD to optimize current surface OD Pairs using
13 the proposed service standard changes. The result of this model is an optimized
14 surface network which better maximizes transportation efficiencies. For the next
15 model iteration, which introduces current air OD Pairs, the routings in the first
16 model result are "locked" to ensure that the model would not create inefficient
17 routings of current surface pairs to accommodate the air OD Pairs. This model
18 then determines the optimized surface routings for current air OD Pairs either by
19 utilizing the "locked" routings from the first iteration or developing new routings
20 exclusively for the current air OD Pairs. Finally, the surface routes created
21 exclusively for the current air OD Pairs are evaluated to determine if those new

² TMOD specializes in optimizing both large and small transportation networks by providing users with a vast array of customizable variables and inputs. Here, TMOD build 2019.1 and PC*Miler 30[®] were employed. The software ran on a virtual desktop server.

surface routes are more cost effective than transporting via the air network. The evaluation of a proposed air-to-surface lane compares the estimated cost for the surface trip to the estimated cost per cubic foot of transporting that volume via the air network.³ The final surface routing model result is a combination of the new surface routings added exclusively for current air OD Pairs that are determined to be cost effective and the optimized surface routings that combined both current surface and air OD Pairs in the second model iteration.

B. Inputs

A number of inputs, appropriate to this type of modeling and described below, were utilized in the modeling. Package volume was derived from the Postal Service's Product Tracking & Reporting (PTR) System. The second highest Wednesday volume from October 2020 was selected. All other volume in the model is based on March 2019 WebODIN⁴ (renamed from ODIS) data that is a monthly total by Origin 3-digit ZIP Code, Destination 3-digit ZIP Code, class, and shape. First-Class Mail volumes were compared and scaled to match the USPS monthly Revenue & Volume Comparison (RVC) report for March 2020. The volume used for the modeling represents the second-highest Wednesday in the month of March. To estimate the second-highest Wednesday volume, total container scans for the month of March were first pulled from the Surface Visibility (SV) database. The daily proportion of containers was determined by

³ The model uses an estimated cost for surface trips of \$2.50 per mile (rounded up from \$2.48 per mile). See *ProcurementIQ Procurement Report: 52869612 National Trucking Services* (April 2020). A cost of \$7.50 per cubic foot was assumed for air transportation.

⁴ LR-N2021-1-1, 1_P.WEB_ODIN_MARCH_2019.txt; LR-N2021-1-NP1, NP1_NP.WEB_ODIN_MARCH_2019.txt.

1 dividing the daily count by the total. The proportion of the second highest
 2 Wednesday containers to the total containers was applied to the ODIN piece-
 3 level data to estimate the second highest Wednesday volume. This volume was
 4 further compared to data from the Informed Visibility (IV) system to ensure
 5 accuracy.

6 The volume mapping files consist of the Transportation Optimization
 7 Planning and Scheduling (TOPS) originating mapping file⁵ and the National
 8 Distribution Labeling List (NDLL) file.⁶ The TOPS file contains origin 3-digit ZIP
 9 Codes that are mapped to their corresponding processing facilities. This file
 10 provides a mapping for every Origin 3-digit ZIP Code, class, and shape to a
 11 processing facility. The NDLL file contains destination 3-digit ZIP Codes mapped
 12 to their corresponding destination processing facilities. The file provides all
 13 processing facilities across the country with the required separations and
 14 destination location for every 3-digit ZIP Code, class, and shape.

15 The Mode Mapping file,⁷ a current state mode matrix, is pulled from the
 16 USPS Distribution Table Maintenance System (DTMS). The matrix is presented
 17 by Origin 3-digit ZIP Code, Destination 3-digit ZIP Code, class, shape, and day of
 18 the week. For the model the Wednesday mode matrix was used. This table
 19 designates the approved mode of transportation, air or surface, between every
 20 origin and destination pair in the country.

⁵ LR-N2021-1-1, 1_Transportation_Optimization_Planning_Scheduling_originating_mapping.xls.

⁶ LR-N2021-1-1, 1_National_Distribution_Labeling_List.xlsx.

⁷ LR-N2021-1-1, 1_P.Mode_Mapping.xlsx; LR-N2021-1-NP1, NP1_NP.Mode_Mapping.xlsx.

1 For the Containerization file,⁸ volumes are converted to All Purpose
2 Containers (APCs) using the USPS Management Operating Data System
3 (MODS), Manual M-32, conversion rates by product. Pieces were converted to
4 APCs to provide a universal unit of volume for the modeling software, since 10
5 letter pieces do not require the same space as 10 parcels. However, by
6 converting all mail to equivalent APCs, the Postal Service can now accurately
7 create shipments for the software to analyze using volume inputs that are directly
8 comparable. This model assumes the average APC would be 75 percent full.
9 Volume requiring more than a 75 percent full APC was rounded to the next
10 highest number of containers. For example, if a lane converts piece volume to
11 1.2 APCs, this was modeled as 2 APCs. Performing the above conversions and
12 calculations outside of the model significantly reduced the complexity of
13 calculations that would have to take place inside the software.

14 The Shipment Table⁹ contains the shipment data, or origin to destination
15 pair volumes used in the model. Each shipment must consist of an origin,
16 destination, transportation window, product, and volume. These are the
17 minimum required inputs to run a model for optimization in TMOD. The model
18 optimizes the routing of the shipments referenced in this table, with the objective
19 of minimizing transportation miles while adhering to all parameters and
20 constraints.

⁸ LR-N2021-1-1, 1_Containerization_File.xlsx.

⁹ LR-N2021-1-1, 1_P.Shipment_Table.xlsx; LR-N2021-1-NP1, NP1_NP.Shipment_Table.xlsx.

1 The Location Table¹⁰ contains every location used in the model. Every
2 origin and destination from the Shipment Table must be defined in this table. For
3 this model, National Air and Surface System (NASS) facility codes from TOPS
4 and the NDLL are used as locations. Surface Transfer Centers (STCs) are used
5 as hub locations for the model. Every NASS location is associated with its
6 current address and latitude and longitude coordinate from the Facilities
7 Database (FDB).

8 By default, PC*Miler is used to calculate the time and distance between all
9 pairs represented in the model. PC*Miler uses the road speed limits to determine
10 transit time and does not currently adjust for traffic. The Transit Override Table¹¹
11 is an optional table that can be used in tandem with the results from PC*Miler to
12 allow users to define a custom transit time between pairs in the model. For this
13 model, we are using this table because it allows us to use USPS Supply
14 Management's standard of 46.5 miles per hour for transportation planning.

15 The Access Rating Tools (ART) Database¹² is a Microsoft Access file with
16 a custom user interface. This file defines all valid paths of travel and associated
17 assumed costs for that travel. While optimizing routings, the model checks
18 proposed routings against the ART file to ensure they are valid and determine
19 the cost incurred.

20 The Strategy File¹³ is a TMOD-specific file that gives instructions to the
21 software on how to perform the optimization. This file allows users to define the

¹⁰ LR-N2021-1-2, 2_Location_Table.xlsx.

¹¹ LR-N2021-1-2, 2_Transit_Override_Table.xlsx.

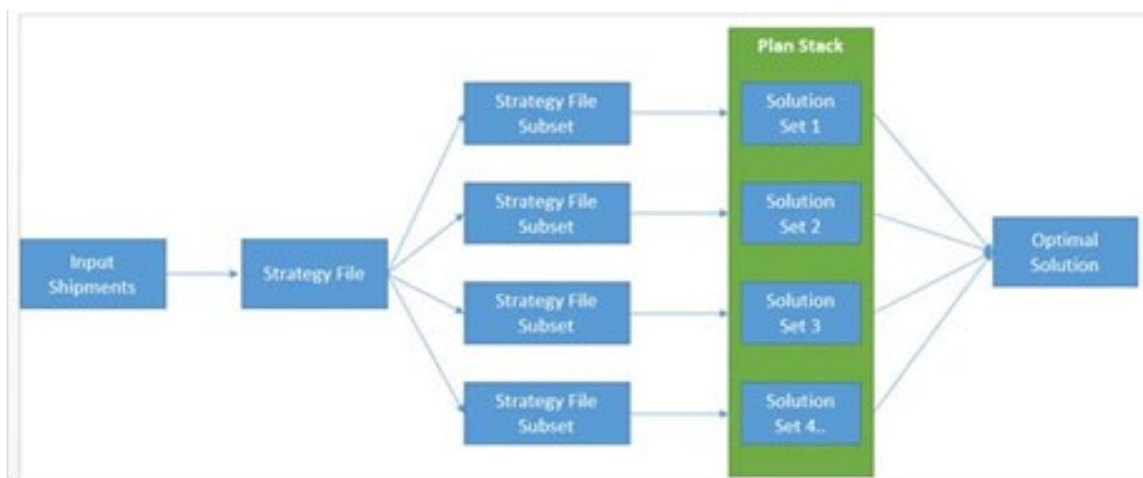
¹² LR-N2021-1-2, 2_Access_Rating_Tool.mdb.

¹³ LR-N2021-1-2, 2_Strategy_File.strat.

1 order in which certain optimizations are performed. For the modeling developed
2 for this docket, the file was designed around the Postal Service's complex
3 business rules. To achieve this, all the processes that the model must solve
4 were mapped out, creating many different strategy files to test. The run time,
5 solution, and complexity of each strategy file was taken into consideration when
6 deciding on the final version.

7 The version used in this modeling effort gives the best solution without
8 sacrificing the run time or being overly complex. Reducing the complexity is
9 important, because small changes in the rules could require significant changes
10 in a more complex strategy file, making comparisons across different model runs
11 increasingly difficult. The strategy file used in this model builds the solution using
12 a series of optimization functions within a PLAN STACK, or repository of saved
13 solutions. The results are then reset, a new set of functions are run, and the
14 results are saved to the PLAN STACK. Once all functions have run, the strategy
15 file will then reference the PLAN STACK (which has all of the different solutions
16 stored) and select the optimal solution from all saved solutions. The below
17 diagram illustrates this process.

Figure 1: Optimization Functions Process



More specifically, the strategy file first builds the optimal direct routes and multi-stop routes and saves the solution to the PLAN STACK. It then builds the optimal hub routings and stores those in the PLAN STACK. It will then take the best of both of these solutions for the final resulting routings.

The Parameter File¹⁴ is also a TMOD-specific file. It contains a set of global optimization parameters. Many of the parameters are also defined at a more granular level. They include maximum volume per trip, maximum stops in transit (for multi-stops), maximum allowed transit duration, and maximum legs per shipment (which controls multiple hub usage). TMOD uses the most granular level of each parameter, and the high-level global parameters are used to fill any gaps where specificity is not defined.

C. Proposed Service Standard Assignment Rules

The following proposed service standard assignment rules were utilized in the modeling. Two-day surface transportation was assigned to OD Pairs where

¹⁴ LR-N2021-1-2, 2_Parameter_File.param.

1 the combined distance between the origin P&DCF, destination ADC, and
2 destination SCF was between zero and 139.5 miles, or up to 3 hours of
3 combined transit time at 46.5 miles per hour.¹⁵ This distance was selected to
4 add approximately 3 hours to the transit window to allow the volume to be
5 massed in a transfer hub, or to allow additional time for dispatching from sites
6 with later clearance times. Currently, in order to meet the 08:00 Critical Entry
7 Time for letters and flats, the origin processing facility must dispatch as early as
8 02:00. Many facilities are not capable of dispatching that early, or this forces the
9 origin locations to establish inefficient direct trips to the destination locations.
10 The model's added slack time will allow more efficient transportation between
11 two-day pairs and improve service capability.

12 Three-day surface transportation was assigned to OD Pairs where the
13 combined distance was greater than 139.5 miles and up to 930 miles, or up to 20
14 hours of transit time at 46.5 miles per hour. Similar to two-day, this distance and
15 time was selected to add slack time to the transit window, allowing later
16 departure from origin and transfer through a Surface Transfer Center. For
17 example, the origin can depart a trip to a destination at the boundary of the three-
18 day service area as late as 07:00 from origin, allow 4 hours for transfer at a hub
19 facility, and arrive at destination one hour prior to a CET of 08:00, day-2, at
20 destination.

21 Four-day service standards were assigned to OD Pairs where the
22 combined distance was between 930 and 1,907 miles, or up to a combined 41

¹⁵ The origin of this figure is discussed in section II.D below.

1 hours of drive time at 46.5 miles per hour. Five-day service standards were
2 assigned to OD Pairs requiring greater than a combined 41 hours of drive time.

3 The intent of adding incrementally more slack time to the transit windows
4 as distances increased was to encourage pairing of shipments at the origin
5 locations, allow volume transfers via STCs, add buffer time to absorb
6 transportation delays, and still enter letter and flat volume up to the destination
7 CET of 08:00 the day prior to the delivery standard. Allowing such flexibility in
8 the transit time between OD Pairs allows the model to test additional routings for
9 optimization and build efficient routings.

10

1 **D. Assumptions**

2 Several assumptions were made in the modeling. These assumptions,
3 and the reasons for making them, are described below. They are categorized as
4 transportation assumptions and general modeling assumptions.

5 For transportation, in order to generate transit times between pairs, 46.5
6 miles per hour was used. This rate was selected as a value accepted by Supply
7 Management and used when planning and soliciting new transportation with
8 suppliers. This general mile-per-hour rate for long haul trips accounts for breaks
9 and driver changes.

10 Maximum volume per 53-foot trailers was modeled as 1,575 cubic feet.
11 This reflects 42 APCs at 75 percent capacity (37.5 cu-ft) per trailer. Volume
12 conversions to APCs were limited to 75 percent capacity to prevent unrealistic
13 containerizations of 100 percent capacity.

14 Trips were not allowed to flow through more than one STC or hub. All
15 transportation was either defined as a direct trip (from origin to destination,
16 allowing stops to pick-up or drop-off shipments in-between) or a non-stop trip to a
17 single STC. Volumes were aggregated at the STC from multiple origins to build
18 trips to the final destination with improved utilization. Multi-stop trips were
19 allowed with a maximum of two extra stops. In addition, trips were structured as
20 “all picks and one drop” or as “all drops and one pick.” “All picks and one drop”
21 means the origin location loads volume for a single destination and the model
22 allows the trip to pick up additional loads for that same destination (many-to-one).
23 “All drops and one pick” means the model allows a single load at an origin

1 location to be unloaded at multiple destinations. The load would be load-
 2 sequenced where the first stop would be loaded at the tail of the trailer and the
 3 final destination would be loaded at the nose of the trailer. The below diagram
 4 illustrates these trip structures.

5 **Figure 2: Trip Structures**

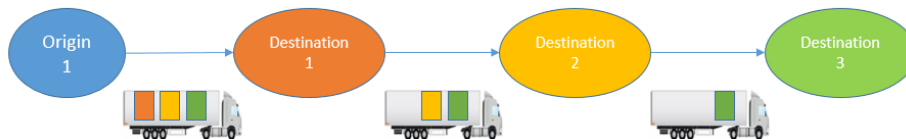
Scenario 1: All picks and one drop

- Origins 1-3 all load volume for destination
- Origins do not load or unload ANY other volumes
- Load sequencing is not required (same destination)



Scenario 2: All drops and one pick

- Origin1 loads volumes for destinations 1-3
- Destinations 1-3 only unload volume
- Load sequencing is required



6
 7 The model does not mix multiple loads and unloads on the same trip. For
 8 example, it will not allow an origin to load volume for multiple destinations and
 9 then allow it to load volume from the first stop along the way. Combining loads
 10 and unloads was not allowed in the model in order to simplify the operation at the
 11 receiving sites.

12 The following general modeling assumptions were also made. Origin
 13 Dispatch of Values (DOVs) were based on 95th percentile machine end times,
 14 plus an additional 90 minutes for dispatch preparation and staging, or 03:30,
 15 whichever was earlier. Machine end times were extracted from the USPS Web

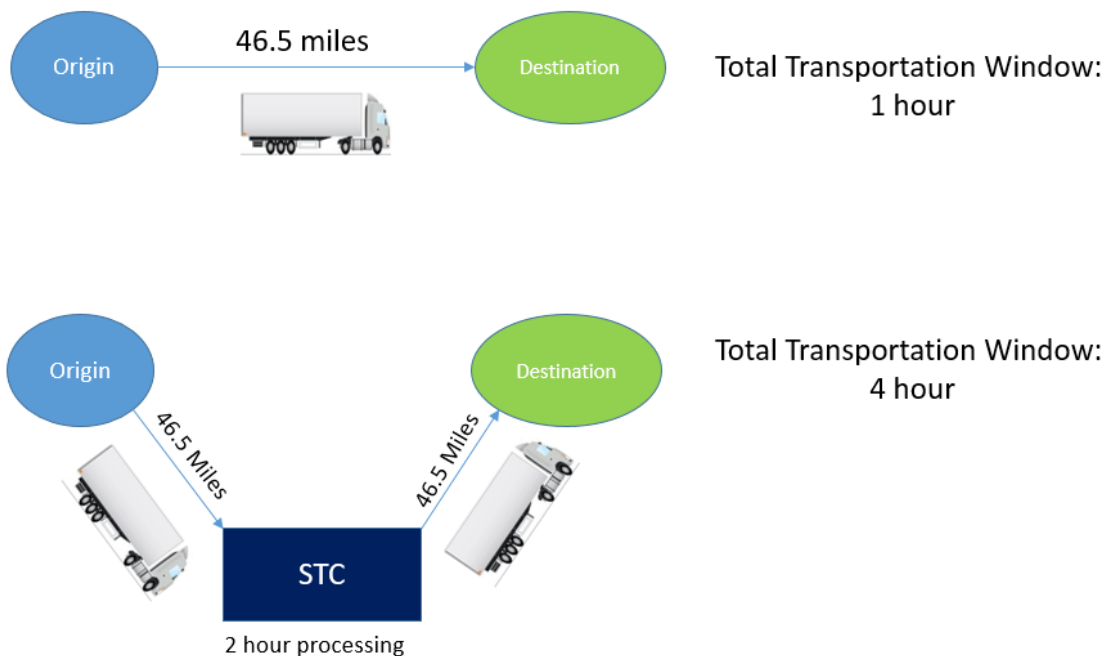
1 End-Of-Run (EOR) database. This database tracks the machine processing runs
2 including start, end, and down times for the majority of mail processing machines
3 in every facility. The 90 minutes added to the machine clearance times is the
4 USPS-accepted expectation of when volume would be ready for dispatch
5 following the completion of mail processing.¹⁶ Additionally, origin locations flow
6 outbound volumes through their designated aggregate facilities, which
7 consolidate volumes to improve utilization of network trips. Destination CETs are
8 based on product and shape:

- 9 • Letters and flats have a CET of 08:00 the day prior to the
10 scheduled day of delivery, per the service standard; and
- 11 • Parcels have a CET of 20:00 the day prior to the scheduled day of
12 delivery, per the service standard.

13 Finally, STCs are given a minimum of two hours to process volume and/or cross-
14 dock containers. This two-hour minimum process time means that any shipment
15 routed through an STC will have at least two hours added to the total transit time.
16 The below diagram illustrates this process.

¹⁶ The 90 minutes accounts for 30 minutes to clear secondary operations after primary operations, 30 minutes for manual operations, and 30 minutes for dispatch operations.

1

Figure 3: STC Transportation Windows

2

3 STCs are only able to service destinations within an eight-hour drive time
 4 from the STC. The range of certain STCs was increased to reduce the impact of
 5 the proposed transportation changes. Salt Lake City was increased from eight to
 6 fourteen hours to more accurately align with current state service reach, covering
 7 all the way to the Pacific Northwest coast. In addition, every destination was
 8 assigned to at least one STC. If a destination is not within eight hours of any
 9 STC (or within fourteen hours of Salt Lake City), then it was assigned to the
 10 closest STC. And if a destination is within the service area of multiple STCs, that
 11 destination is eligible to use whichever STC the model selects resulting in the
 12 best solution.

13 **E. Constraints in the Modeling and Refinements**

14 A number of constraints affect the modeling. As a general matter, the
 15 TMOD optimization model utilizes an advanced set of heuristics, and, as with all

1 heuristic models, can produce results that are less than optimal. TMOD offers a
2 variety of ways to approach many of our business rules, and seemingly small
3 changes can sometimes have large unexpected impacts on the results due to the
4 heuristic nature. To ensure we are using the best solution, each model is run
5 multiple times to ensure similar results are obtained.

6 Several constraints of the modeling require manual input or post-
7 processing refinement to mitigate the impact of these constraints. TMOD does
8 not inherently support viable transit times based on traffic or other known factors.
9 As such, known transit time adjustments are currently manually input into the
10 model. Currently TMOD cannot support the complexity of our air network to
11 completely model mode selection. To accommodate this factor, the model is
12 used to identify air pairs that are eligible to be routed via surface transportation
13 using time and distance data. The final mode selection for these eligible lanes is
14 performed outside the model.

15 Significant post-processing is necessary to refine surface network routing
16 results into actual routings that can be implemented. This is due to multiple
17 factors including the TMOD software's ability to build only one-way trips, potential
18 relationships with transportation outside the scope of this model, site-specific
19 operational nuances, and Department of Transportation requirements. The
20 results of the model, being a decision-supporting rather than a decision-making
21 tool, will therefore be analyzed by transportation planners to finalize specific lane
22 transportation to account for limitations of the model prior to implementation.

1 **III. MODELING RESULTS**

2 The modeling yields the below results, which can be categorized as the
 3 expected change in the number of 3-digit ZIP Code to 3-digit ZIP Code OD
 4 Pairs¹⁷ (3-digit OD Pairs) from a two-day¹⁸ and three-day standard to a two- to
 5 five-day standard in the contiguous 48 states; the change in percentage of
 6 volume in the contiguous 48 states of FCM (including remittance mail) from a
 7 two-day and three-day standard to a two- to five-day standard and end-to-end
 8 Periodicals that will see an increase in service standard;¹⁹ and the expected
 9 change in the number of 3-digit OD Pairs whose volume and percentage of
 10 volume that is transported via surface and air transportation in the contiguous 48
 11 states. Greater detail on these results is located in LR-N2021-1-3,
 12 3_SSD_5D_Vol_Impacts_CONUS.xlsx.

13 The modeling results in the following changes in 3-digit OD Pairs in the
 14 contiguous United States that are subject to two-, three-, four-, and five-day
 15 service standards. As compared to current service standards, the number of 3-
 16 digit OD Pairs subject to a one- or two-day service standard decreases from
 17 63,587 to 22,277; the number of 3-digit OD Pairs subject to a three-day service

¹⁷ A 3-digit OD Pair is a pair of an origin 3-digit ZIP Code prefix that feeds to a P&DCF and 3-digit ZIP Codes prefix that is fed by a destination SCF. For example, 3-digit ZIP Code prefix 271 to 3-digit ZIP Code prefix 275 is one distinct 3-digit OD Pair; and 3-digit ZIP Code prefix 271 to 3-digit ZIP Code prefix 278 is another distinct 3-digit OD Pair.

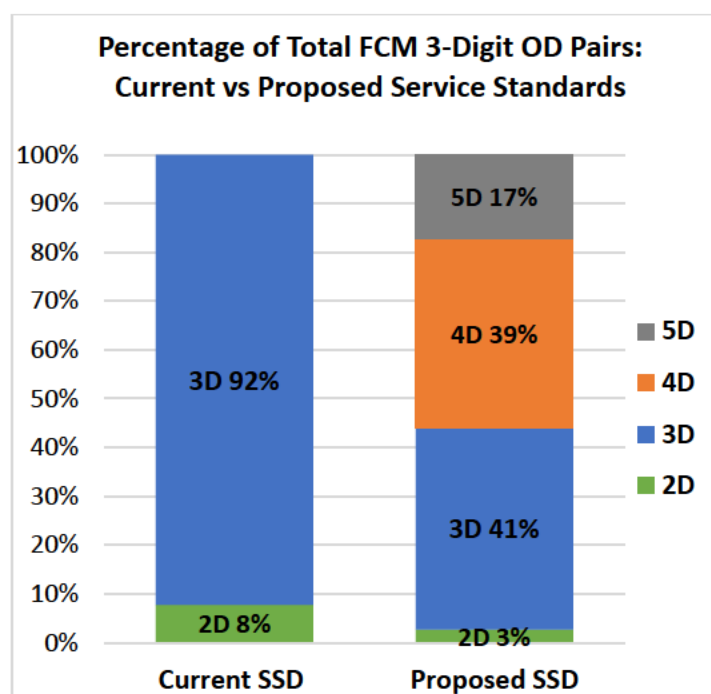
¹⁸ Throughout this section, two-day figures include both one- and two-day values, whether that be the number or percentage of 3-digit OD Pairs whose volume is subject to one- or two-day service standards or mail volume subject to one- or two-day service standards. The exception is for remittance mail figures, which does not have a one-day service standard.

¹⁹ The model projects that 0.2 percent of Marketing Mail pieces, which consists of a small percentage of Marketing Mail that travels through the First-Class network, will see an increase in transit time. However, by processing this volume at the entry location and thereby avoiding increased transit time, the Postal Service expects this volume to meet current Marketing Mail service standards.

standard decreases from 752,725 to 337,731; the number of 3-digit OD Pairs subject to a four-day service standard increases from 0 to 315,051; and the number of 3-digit OD Pairs subject to a five-day service standards increases from 0 to 141,253.

In terms of percentages, the percentage of 3-digit OD Pairs subject to one-to-two-day and three-day service standards decreases from 8 and 92 percent to 3 and 41 percent, respectively. The percentage of 3-digit OD Pairs newly subject to four- and five-day service standards is 39 and 17 percent, respectively. The figure immediately below reflects these results. At the request of participants at the pre-filing conference, data regarding current and proposed service standards at the 3-Digit ZIP Code origin and destination pairs level is located in LR-N2021-1-3, 3_Zip3_OD_Pairs.xlsx.

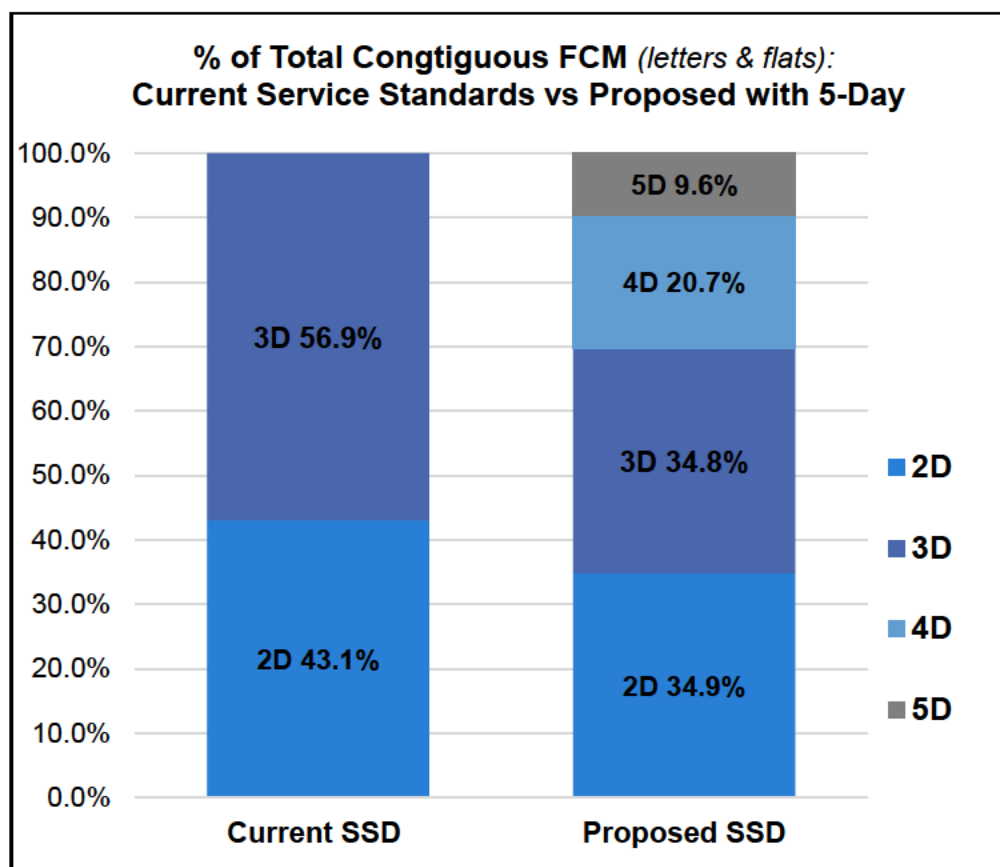
Figure 4: Service Standards Percentage by 3-Digit OD Pairs*



* Includes pairs where origin and destination are the same. 2D represents percentage of OD Pairs with a two-day-or-less service standard.

In turn, the percentage of volume of FCM in the contiguous United States subject to a one- or two-day service standard decreases from 43.1 percent to 34.9 percent; the percentage of volume subject to a three-day service standard decreases from 56.9 percent to 34.8 percent; 20.7 percent of volume is subject to changing to a four-day service standard; and 9.6 percent of volume is subject to changing to a five-day service standard. As such, approximately 81 percent of FCM presently subject to a one- or two-day service standard will maintain its current service standard; and approximately 47 percent of FCM presently subject to a three-day service standard will remain as three-day. The following figure reflects these results.

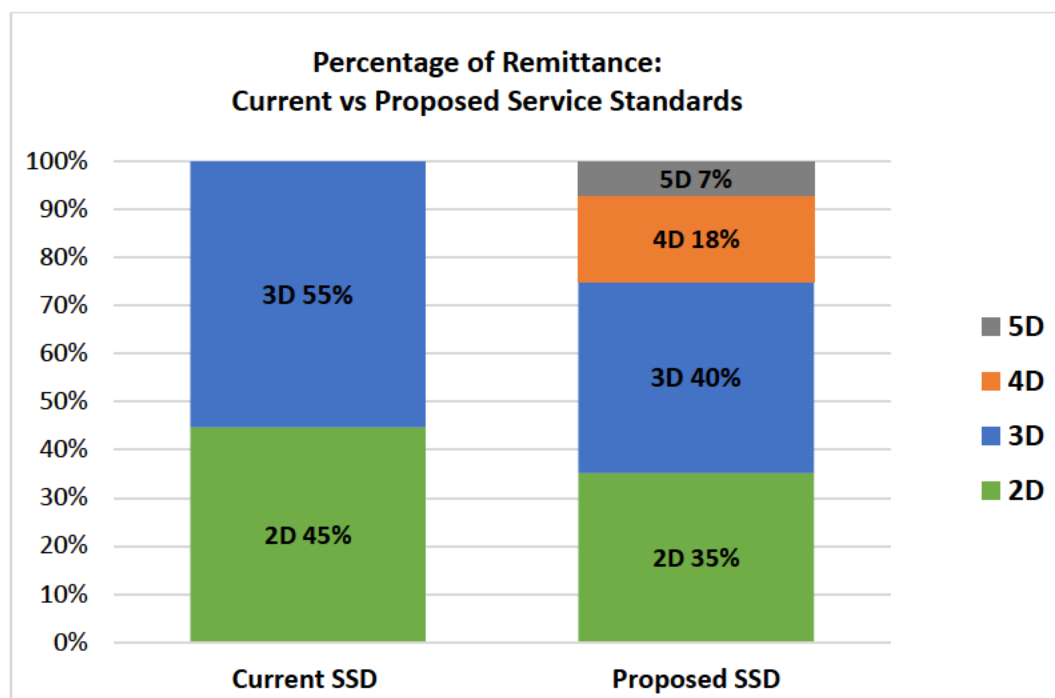
Figure 5: FCM Volume* by Service Standard (Contiguous U.S.)



* 2D represents volume with a two-day-or-less service standard

Within this FCM volume, the volume of remittance mail subject to a two-day service standard is projected to decrease from 45 percent to 35 percent and the volume of remittance mail subject to a three-day service standard is projected to decrease from 55 percent to 40 percent. As such, 79 percent of remittance mail presently subject to a two-day service standard is projected to remain as two-day, and 55 percent of volume presently subject to a three-day service standard is projected to remain as such. Additionally, 18 percent and 7 percent of remittance mail are projected to be subject to four- and five-day service standards, respectively. The following figure reflects these results.

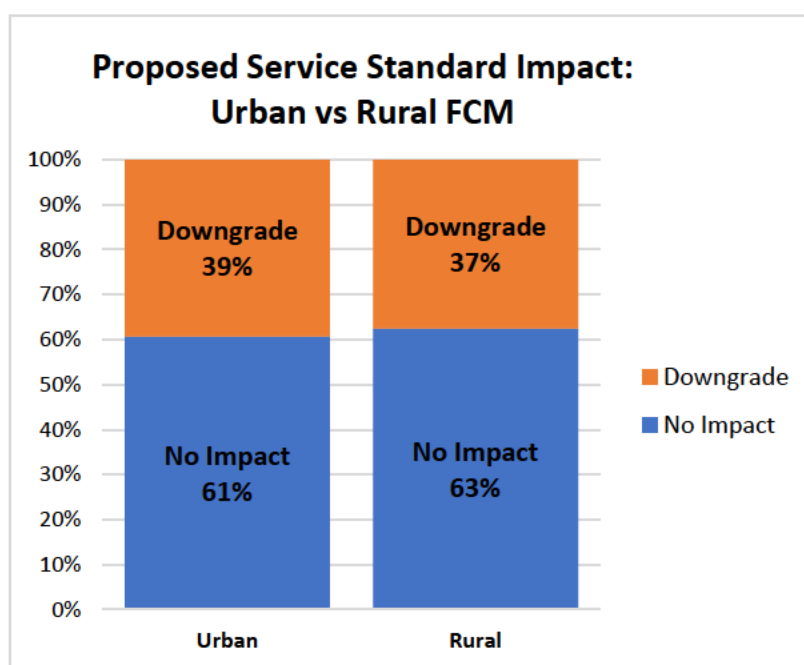
Figure 6: Percentage of Remittance by Service Standard* (Contiguous U.S.)



* Remittance does not have a one-day service standard

The model projects the proposed service changes to have a nearly proportional effect on urban and rural areas:²⁰ 39 percent of urban FCM is projected to be affected by the proposed service standards, while 37 percent of rural FCM is projected to be affected by the proposed service standards. The following figure reflects these results.

**Figure 7: Percentage of Urban and Rural Mail Affected
by Proposed Service Standards**



End-to-end Periodicals in the contiguous United States are modeled to experience the following change: 19 percent of end-to-end Periodicals (accounting for 7 percent of all Periodicals) are projected to have an increase in service standard.

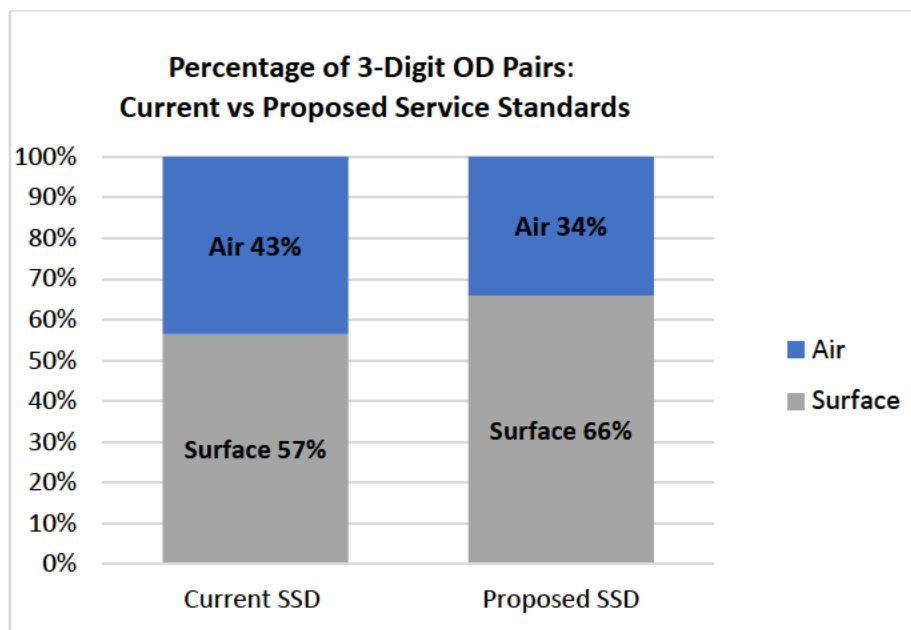
²⁰ For purposes of the results, urban First-Class Mail is defined as First-Class Mail that, based on ZIP Code, is delivered to an Urbanized Area or an Urbanized Cluster; and rural First-Class Mail is defined as First-Class Mail that, based on ZIP Code, is delivered to a Rural area. Incorporating the Census's definitions, an Urbanized Area encompasses 50,000 or more people; an Urbanized Cluster encompasses at least 2,500 people and less than 50,000 people, and a Rural area encompasses areas not within an Urbanized Area or Urbanized Cluster.

1 A focus of the Thress Testimony (USPS-T-5) is the potential contribution
2 impact that could result from implementing these proposed changes to the
3 service standards, and the Monteith Testimony (USPS-T-4) contextualizes these
4 findings and estimates how these changes may impact customer satisfaction.

5 Also projected by the modeling is the change in the number of 3-digit OD
6 Pairs and percentage of volume in the contiguous United States expected to
7 utilize surface and air transportation. Compared to current service standards, the
8 number of 3-digit OD Pairs that utilize surface transportation is expected to
9 increase from 461,607 to 538,380, while the number of 3-digit OD Pairs that
10 utilize air transportation is expected to decrease from 354,705 to 277,932. These
11 figures convert to the following percentages: the percentage of 3-digit OD Pairs
12 that utilize surface transportation is projected to increase from 57 percent to 66
13 percent; and the percentage of 3-digit OD Pairs that utilize air transportation is
14 projected to decrease from 43 percent to 34 percent. The following figure reflects
15 these results.

16

1 **Figure 8: Transportation Mode* by 3-Digit OD Pair (Contiguous U.S.)**

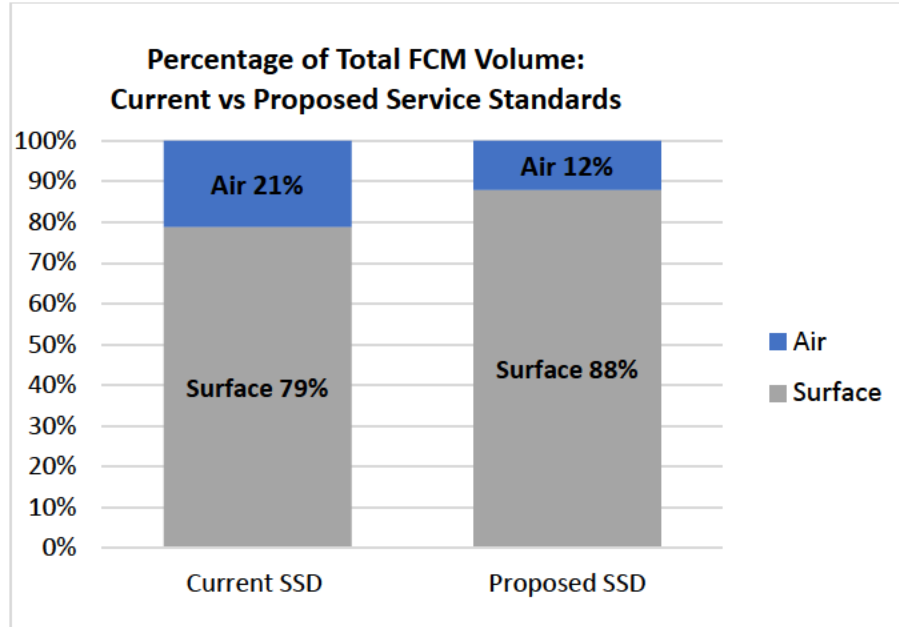


2

3 In turn, the percentage of FCM volume in the contiguous United States
4 that is transported via surface is expected to increase from 79 percent to 88
5 percent, while the FCM volume that utilizes air is expected to decrease from 21
6 percent to 12 percent. The following figure reflects these results.

7

1 **Figure 9: Percentage of Volume by Transportation Mode (Contiguous U.S.)**



2

3 The focus of the Whiteman Testimony (USPS-T-2) is the estimated cost
 4 savings that result from the shifts in transportation method.

5 **IV. CONCLUSION**

6 The Postal Service has utilized appropriate data sources and modeling
 7 techniques to assess the proposed changes to the service standards for FCM
 8 and Periodicals and the effects that such changes will have on transportation
 9 time and efficiencies in the transportation network. The Postal Service envisions
 10 a transition to a more cost-effective transportation network that will allow it to
 11 improve the efficiency, cost-effectiveness, and reliability of its transportation
 12 network, while still providing its customers with valuable products and services.
 13 Although a model is not dispositive and should accordingly be considered a
 14 decision-support tool, rather than a decision-making tool, the modeling described

- 1 in my testimony demonstrates that the proposed service changes would lead to a
- 2 more reliable, cost-effective and efficient transportation network.

LIBRARY REFERENCES SPONSORED BY UNITED STATES POSTAL SERVICE WITNESS STEPHEN HAGENSTEIN

United States Postal Service Witness Stephen Hagenstein sponsors the following library references:

Public

- USPS-LR-N2021-1-1 – Model Input Data
- USPS-LR-N2021-1-2 – Model Defining Tools
- USPS-LR-N2021-1-3 – Model Results
- USPS-LR-N2021-1-7 – Material Provided in Response to Carlson Interrogatory DFC/USPS-T3-2, 5-12
- USPS-LR-N2021-1-13 – Material Provided in Response to MPA Interrogatory MPA/USPS-T3-1
- USPS-LR-N2021-1-15 – Hagenstein Material Provided in Response to Presiding Officer's Information Request No. 2
- USPS-LR-N2021-1-17 – Material Provided in Response to Presiding Officer's Information Request No. 2 (Q15)
- USPS-LR-N2021-1-18 – Hagenstein Material Filed in Response to GCA Interrogatory
- USPS-LR-N2021-1-19 – Material Provided in Response to Hutkins Interrogatories to Witness Hagenstein (First Set)
- USPS-LR-N2021-1-23 – Hagenstein Material Provided in Response to Presiding Officer's Information Request No. 3
- USPS-LR-N2021-1-24 – Hagenstein Material Provided in Response to APWU Interrogatory

Non-Public

- USPS-LR-N2021-1-NP1 – Model Input Data & Tools
- USPS-LR-N2021-1-NP4 – Nonpublic Material Provided in Response to Carlson Interrogatories to Witness Hagenstein (First Set)

- USPS-LR-N2021-1-NP7 – Hagenstein Material Provided in Response to POIR 1
- USPS-LR-N2021-1-NP8 – Nonpublic Material Provided in Response to Hutkins Interrogatories to Witness Hagenstein (First Set)
- USPS-LR-N2021-1-NP9 – Nonpublic Material Provided in Response to Presiding Officer's Information Request No. 3, Question 15

**RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS HAGENSTEIN
TO INTERROGATORY OF AMERICAN POSTAL WORKERS UNION, AFL-CIO**

APWU/USPS-T3-1. In your testimony at page 24, you note that the service standard changes will affect urban and rural mail nearly equally.

- a. Identify each rural area by state and town/village/locality that falls within the following categories identified in the Request for Advisory Opinion:
 - i. Rural areas in intra-SCF and inter-SCF First-Class Mail within the 48 contiguous states where the combined drive time between origin P&DCF, destination ADC, and destination SCF is more than three hours, but does not exceed 20 hours (changing to a three-day service standard).
 - ii. Rural areas in inter-SCF First-Class Mail within the 48 contiguous states where the combined drive time between origin P&DCF, destination ADC, and destination SCF is more than 20 hours but does not exceed 41 hours (changing to a four-day service standard).
 - iii. Rural areas in the contiguous 48 states where the drive time between origin P&DCF, destination ADC, and destination SCF exceeds 41 hours (changing to a five-day service standard).
- b. With regard to your answer to (a), above, identify the total number of “rural areas”, the total number of urban areas, and the percentage of “rural areas” as compared to the total of all areas, urban and rural, that will see a service standard change under the Postal Service’s proposal.

RESPONSE:

- a. Please see file “Urban_Rural_5digit_Detail_v4.xlsx” in USPS-LR-N2021-1-24.
- b. Please see file “Urban_vs_Rural_5DPair_Impacts_26May21_V3.xlsx” in USPS-LR-N2021-1-24.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-2. Please provide the clearance time and critical entry time for First-Class Mail parcels.

RESPONSE:

Planned clearance time for outgoing First-Class Mail parcels is 01:15 hours.

The critical entry time at destination for First-Class Mail parcels is 20:00 hours.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-5. Please provide the clearance time for outgoing Priority Mail parcels.

RESPONSE:

The planned clearance time for outgoing Priority Mail parcels is 01:15 hours.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-6. Please describe the processing network for First-Class Mail parcels to the extent that the facilities that process First-Class Mail parcels differ from the facilities that process First-Class Mail letters and flats. In your response, please list the facilities that process First-Class parcels that do not also process either letters or flats and indicate the ZIP Code areas that these facilities serve.

RESPONSE:

Due to the size and processing capability of the Postal Service's automated letter sorting equipment, there are more processing facilities responsible for processing letters than those responsible for processing packages. A total of 168 Automated Area Distribution Centers (AADCs) service the entire country. 147 Area Distribution Centers (ADCs) process First-Class Mail parcels for the entire country.

Please see USPS-LR-N2021-1-7,Q6 – AADC_non_AADC.xlsx for the list of facilities that process First-Class parcels but do not also process either letters or flats and the ZIP Code areas that these facilities serve.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-7. Please describe the processing network for Priority Mail and identify the facilities that process Priority Mail and the ZIP Code areas that these facilities serve. Please also identify differences between origin service areas and destination service areas for these facilities.

RESPONSE:

Priority volume is processed in Originating Processing and Distribution Centers on package sorting equipment, flat sorting equipment, and manual sortation operations.

The origin facility will sort to the required separations according to the National Distribution Labeling List (NDLL). Smaller packages for air destinations are sorted into sacks. Sacks, larger Non-Machineable Outsides (NMOs), and any Priority trays for air destinations are scanned and assigned to the air network, then containerized to the appropriate separation to the respective carrier and staged for dispatch to the Terminal Handling Service. Surface lanes are sorted into containers, then staged for dispatch.

At destination, the processing site will open or empty all sacks and containers and processes the volume to the 5-digit offices, hubs, and downstream destinating SCF(s), if applicable. Any containers flowing to a downstream hub or SCF will be sorted to the 5-digit office prior to dispatch.

The delivery office sorts the container to the respective carrier routes prior to delivery.

Please see file "Q7 – Priority Processing.xlsx" for the facilities that process Priority Mail and the ZIP Code areas that these facilities serve.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-8. Please refer to your testimony at page 13, lines 16–19. Please explain why some processing facilities cannot meet the 02:00 clearance time, and please explain whether consolidations of outgoing mail processing into those facilities from other facilities that processed outgoing mail in the past are a factor in the inability of some processing facilities to meet the 02:00 clearance time.

RESPONSE:

The time needed for the various sequenced steps that make up processing mean that some facilities have difficulty meeting a 02:00 dispatch time. Since February, the percentage of outgoing secondary volume cleared by 00:30 on a weekly basis was less than 83%. After outgoing secondary operations clear, manual processing and dispatching operations must clear. Manual operations can lag behind the outgoing operations by approximately 60 minutes. Large facilities typically have mechanized tray transport equipment that move volume from single-piece sortation operations to the tray sortation equipment, and from the tray sortation equipment to dispatch operations. Tray systems can become bottlenecked during dispatch time when all of the outgoing machines dispatch volumes in a limited window. Some facilities require 90 minutes to clear the mechanized tray lines and tray sorters. Some facilities have been forced to implement special parallel processes to manage destinations with early dispatches, keeping trays out of mechanized equipment.

For efficient transportation, when possible both packages and mail are dispatched on the same transportation. Package processing capacity constraints due to package growth is another factor inhibiting dispatching by 02:00 hours. The planned clearance time is 01:15 hours, and, since February, the percentage of volume cleared by 01:15 hours on the package processing equipment is less than 89 percent nationally. This

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

does not account for non-machinable volumes that are typically finalized after the machines are finished processing. Consolidations of outgoing volume are a factor in some processing facilities' ability to meet the 02:00 dispatch time, but not the primary factor.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-9. Please provide a list of Surface Transportation Centers and the ADCs, SCFs, or other facilities that each STC serves.

RESPONSE:

Please refer to USPS-LR-N2021-1-7, Q9 – STCs.xlsx.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-10. Please provide, separately, the percentage of the volume originating at the following P&DCs for which the First-Class Mail service standard will increase by one day, two days, and, if applicable, three days:

- a. Boston MA
- b. New York NY
- c. Miami FL
- d. Houston TX
- e. Chicago IL
- f. Seattle WA
- g. Portland OR
- h. San Francisco CA
- i. Los Angeles CA
- j. Honolulu HI
- k. Anchorage AK

RESPONSE:

Please refer to the charts below the percentage of the volume originating at the above P&DCs for which the First-Class Mail service standard will increase by one day, two days, and, if applicable, three days:

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

	Service Standard				
	Current 2 Day		Current 3 Day		
Facility Name	Proposed 2 Day	Proposed 3 Day	Proposed 3 Day	Proposed 4 Day	Proposed 5 Day
Boston MA P&DC	88%	12%	31%	45%	24%
Carol Stream IL P&DC	90%	10%	58%	34%	7%
Los Angeles CA P&DC	96%	4%	11%	21%	67%
Miami FL P&DC	80%	20%	31%	56%	13%
Morgan NY P&DC	91%	9%	42%	36%	21%
North Houston TX P&DC	63%	37%	25%	71%	3%
Portland OR P&DC	90%	10%	16%	25%	59%
San Francisco CA P&DC	98%	2%	52%	10%	38%
Seattle WA P&DC	89%	11%	25%	28%	46%
Grand Total	86%	14%	27%	37%	36%
	Service Standard				
	Current 2 Day	Current 3 Day	Current 4 Day	Current 5 Day	
Facility Name	Proposed 2 Day	Proposed 4 Day	Proposed 5 Day	Proposed 5 Day	
ANCHORAGE AK	100%	100%	100%	100%	
HONOLULU HI	100%	100%	100%		

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-11. Please refer to Figure 8 on page 26 of your testimony. Please provide the origin-destination pairs that comprise the 34 percent of origin-destination pairs for which the mail would travel by air if the change in service standards that is the subject of this docket is implemented.

RESPONSE:

Please see the Excel spreadsheet filed under seal within USPS-LR-N2021-1-NP4.

**RESPONSE OF USPS WITNESS HAGENSTEIN TO INTERROGATORIES OF
DOUGLAS F. CARLSON**

DFC/USPS-T3-12. Please identify the reasons why First-Class Mail fails to be delivered within the service standard and the approximate proportion of the failures that each reason causes.

RESPONSE:

Please refer to USPS-LR-N2021-1-7, Q12 – Top service impacts – root cause –

FY20.xlsx.

**RESPONSE OF THE UNITED STATES POSTAL SERVICE TO INTERROGATORIES
OF GREETING CARD ASSOCIATION**

GCA/USPS-T3-1. Please refer to page 6 of your prefilled testimony, where you state that “Furthermore, differing CETs for FCM and packages, leading to separate networks for separate products, has reduced utilization efficiency.”

- a. Are differing CETs for FCM and packages the sole cause of separate networks?
- b. If your answer to (a) is negative, please describe the other causes of separate networks.

RESPONSE [double-spaced]:

- a. The differing CETs for First-Class Mail and First-Class Package Service is the cause of dispatching on different networks.
- b. N/A

RESPONSE OF THE UNITED STATES POSTAL SERVICE TO INTERROGATORIES OF GREETING CARD ASSOCIATION

GCA/USPS-T3-2.

- a. At page 8 of your prefiled testimony, you state that First-Class volume used as an input is based on the second-highest Wednesday in the month of March 2020. Please explain fully the reasons for choosing this day's volume as the input for the modeling.
- b. At the same page, you state that package volume used as an input is based on the second-highest Wednesday in October 2020. Please explain fully the reasons for choosing this day's volume as the input for the modeling.

RESPONSE:

- a. The second highest Wednesday in March was selected because March is historically an average month of the year and Wednesday is an average day of the week.
- b. The second-highest Wednesday in October was selected for package volume to represent the growth realized due to the COVID pandemic. Package volume was observed to increase dramatically in March 2020, then started declining in June before plateauing in the September and October timeframe. The assumption was that October would be representative of a new base package volume.

RESPONSE OF THE UNITED STATES POSTAL SERVICE TO INTERROGATORIES OF GREETING CARD ASSOCIATION

GCA/USPS-T3-3.

- a. Please refer to page 20 of your prefiled testimony. Footnote 20 on that page indicates that the “rural”/“urban” distinction discussed on that page and illustrated in the graphic refers to the *destination* point as either “rural” or “urban.” Does the model produce, or allow for the production of, results showing the distribution between “rural” and “urban” of *origination* points for the subject mail?
- b. If your answer to part (a) is affirmative, please provide the distribution, as between “rural” and “urban” origination points, for the subject mail.
- c. If your answer to part (a) is negative, are you aware of any estimate or assumption used by the Postal Service with respect to the distribution between “rural” and “urban” of origination points for the subject mail? If so, please (i) describe the estimate or assumption, and (ii) state whether, to your knowledge, that estimate or assumption was used in developing the plan for changed First-Class service standards; and, if it was, how it was used.

RESPONSE:

- a. Yes.
- b. 39% of originating mail from rural areas²¹ my testimony is expected to be downgraded. 38% of originating mail from urban areas is expected to be downgraded. Please see the Excel spreadsheet filed in USPS-LR-N2021-1-18.
- c. N/A

²¹ For the definition of rural and urban, see Direct Testimony of Stephen B. Hagenstein on Behalf of the United States Postal Service (USPS-T-3), Docket No. N2021-1 (Apr. 21, 2021), at p. 24, fn 20.

RESPONSE OF THE UNITED STATES POSTAL SERVICE TO INTERROGATORIES OF ASSOCIATION OF MAGAZINE MEDIA

MPA/USPS-T3-1. In Library Reference USPS-LR-N2021-1/3, please refer to the tab "Periodicals_Impact" in the file "3_SSD_5D_Vol_Impacts_CONUS.xlsx," and the tab "OD_Contiguous" in the file "3_Zip3_OD_Pairs.xlsx."

- (a) Please confirm that the Postal Service's best estimate is that its proposal would result in downgraded service standards for seven percent of Periodicals volume. If not confirmed, please explain fully.
- (b) Please confirm that the Postal Service proposal will not affect service standards for any Periodicals entered at a DDU, DCSF, DADC, or DNDC. If not confirmed, please explain fully.
- (c) Please confirm that the Postal Service expects that the proposal would increase the percentage for Periodicals that will be transported with First-Class Mail. If not confirmed, please explain fully.
- (d) In an electronic spreadsheet format similar to 3_Zip3_OD_Pairs.xlsx, tab "OD_Contiguous," please provide the current service standard, proposed service standard, and Periodicals volume for every 3-Digit Origin-Destination Pair that underlies the Postal Service's estimate that the proposal would result in downgraded service standards for seven percent of Periodicals volume. Please also describe the extent to which the proposed service standards by origin-destination pair for Periodicals may change before the proposal is finalized.

RESPONSE:

- (a) Confirmed.
- (b) Confirmed.
- (c) Confirmed.
- (d) Please refer to USPS-LR-N2021-1-13, file "13.D Periodicals OD Pairs.xlsx", which identifies the lanes and estimated Periodicals volumes in the First-Class Network (FCN) impacted by the proposed service standard change. The mode for the specific lanes has yet to be finalized and until that time, the estimated volume to be merged with FCM is unknown. The seven percent downgrade does not include the potential upgrades as volume is shifted from the NDC network to the FCM network.

RESPONSE OF THE UNITED STATES POSTAL SERVICE TO INTERROGATORIES OF NATIONAL POSTAL POLICY COUNCIL

NPPC/USPS-T3-1. Please refer to page 2, lines 1 through 3, of your testimony, where you state: “To illustrate, when mail volumes were increasing between 1993 and 2006, the Postal Service added processing and distribution facilities to the processing network.”

- a. Please provide counts of processing and distribution facilities by end of year from 1993 to 2021.
- b. Please provide current USPS estimate of these counts for the next five years, assuming implementation of the service standards changes in this proceeding.

RESPONSE:

- a. Data is not available showing the number of processing facilities before 2010.

Below is a table showing the number of facilities between 2010 and 2013.

By Pre-2013 Classification				
Type	2010	2011	2012	2013
P&DC/P&DF	260	251	241	205
Customer Service Facilities	164	115	84	28
NDC	21	21	21	21
L&DC	13	10	10	10
Annexes	51	46	43	39
STC	11	10	10	9
AMC	1	1	1	1
REC	2	2	2	2
ISC	5	5	5	5
Total	528	461	417	320

There was no change to number of plants since the Network Rationalization

Phase II was put on hold except for adding the new Portland P&DC, Springdale

Annex, and Music City Annex in Nashville, TN.

Type	2021	2022	2023	2024	2025
Annex	33	33	33	33	33
ASF	3	3	3	3	3
DDC (F1)	2	2	2	2	2
ISC	5	5	5	5	5
NDC	21	21	21	21	21
PDC	169	158	158	158	158
PDC	51	51	51	51	51
TOTAL	284	273	273	273	273

- b.

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Please note that implementation of the service standard proposal is not a direct factor in the number of processing facilities expected in the next 5-years.

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NPPC/USPS-T3-4. Please refer to page 3, lines 20 through 22, of your testimony, where you state: "The functional responsibility of PVS is to transport large containers of mail between mail processing facilities, and to and from airports, Post Offices, stations, and branches." Please describe the types of containers that are generally used.

RESPONSE:

PVS typically will transport APCs (or similar), hampers, pallet boxes of parcels, pallets of bundles and trays, CASTRs, and OTRs.

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NPPC/USPS-T3-5. How many total pieces of First-Class Letter Mail were transported between mail processing facilities in 2020? Please disaggregate by Single Piece, Non-Automation, Mixed AADC Automation, AADC Automation, and 5-Digit Automation. If you are unable to provide a count, please provide an approximation and describe its development.

RESPONSE:

The data to disaggregate the volumes as requested are not available.

About 79% of FCM Letters/Cards in the service performance measurement moved between facilities in FY2020.

Origin Facility <> Expected Destination Facility	Total Volume
28,016,588,686	35,059,545,535

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NPPC/USPS-T3-6. Please refer to page 4, lines 6 through 9, of your testimony, where you state: "On average, HCR transportation is less expensive than PVS." Please provide the average cost of PVS used in your modeling.

RESPONSE:

PVS was not specifically planned or used in the modeling. Plant to plant transportation is primarily HCR.

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NPPC/USPS-T3-7. For Highway Contract Routes, what is the current average capacity utilization of:

- a. Short haul trips?
- b. Long haul trips?

RESPONSE:

- a. Short haul trips, categorized as HCR transportation less than or equal to 150 miles, had an average utilization of 38% from March through April 2021.
- b. Long-haul trips, categorized as 'Network' HCR transportation greater than 150 miles, had an average utilization of 51% from March through April 2021.

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NPPC/USPS-T3-8. Please provide the HCR average capacity utilization in your optimized case for:

- a. Short haul trips.
- b. Long haul trips.

RESPONSE:

- a. Short haul trips in the optimized proposed service standard model (less than or equal to 150 miles) averaged 77% utilization.
- b. Long haul trips in the model (greater than 150 miles) averaged 82% utilization.

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NPPC/USPS-T3-9. Please refer to your library reference filed as USPS-LRN2021-1/1 from April 21, 2021. Please provide data dictionaries for the file named 1_P.WEB_ODIN_MARCH_2019.txt.

RESPONSE:

class Field	Desc		delivery_type Field	Desc		shape Field	Desc
FCM	First-Class Mail		FLT	Flat		CRT	Carrier Route
MKT	Marketing Mail		LTR	Letter		HDS	High Density Saturation
PER	Periodicals		OTH	Other		PST	Presort
			PKG	Package		SPC	Single Piece
			UNK	Unknown		UNK	Unknown
						EDR	EDDM

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NPPC/USPS-T3-10. Please refer to your library reference filed as USPS-LRN2021-1/3. For the file named 3_SSD_5D_Vol_Impacts_CONUS.xlsx, tab "Marketing_Mail_Impact":

- a. Please confirm that cell C6 has a value of 946,863 pieces in the end to end network of a total of 206,590,998.
- b. Does the amount of marketing mail in the end to end First-Class Mail network change materially in the optimized case? If so, to what?

RESPONSE:

- a. Confirmed
- b. No, it is not estimated to change materially.

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(REDIRECTED IN PART FROM WITNESS WHITEMAN)
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 1**

Question 14. Under the proposed changes, the Postal Service expects a reduction of 49.3 percent in First-Class Mail pounds flown.²²

- a. Will the available space that results from the reduction in First-Class Mail pounds flown be replaced by packages? If yes, how will that affect the cost savings calculated in Library Reference USPS-LR-N2021-1/4?

RESPONSE:

- a. Outside of package growth and Priority volume that has temporarily shifted from air to surface, we are not planning on replacing First-Class letter and flats with packages on the air network. This would not impact projected savings as air lanes that were temporarily shifted to surface due to COVID were planned to be air in the model.

There may be a shift in how we allocate to the air carriers. As volume shifts from air to surface, some additional space may become available on lower-cost carriers to accommodate packages currently being allocated to high-cost carriers due to capacity constraints. A shift to lower-cost carriers would increase savings.

²² Library Reference USPS-LR-N2021-1/3, April 21, 2021, Excel file "3_SSD_5D_Vol_Impacts_CONUS.xlsx," tab "Air_Finance_Summary," cell C4.

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Question 17. Please provide information related to Highway Contract Route (HCR) contracting process, using an example of an Inter-Area highway contract where indicated.

- a. Using an example of an Inter-Area highway contract, please explain what determines HCR contract's cost. For example, please address how the cost is determined by contracted vehicle(s) capacity, number of trips included in a contract, number of miles of each included trip, day(s) of the week included trip(s) would run, or a combination of these and/or other factors. Please also provide typical Inter-Area contract's duration.
- b. Please explain whether HCR contracts include one-way trips, round trips, or both. For round trips, please explain whether trips are scheduled to carry mail on both the outbound and the inbound portions of their respective journeys.
- c. Please provide the average Inter-Area contract cost per contract cost driver (as explained in question 17.a. above) in FY 2020. Please also provide the average Inter-Area contract cost per cubic-foot (ft³) and/or per piece of transported mail, depending on data availability. Please also describe trends in Inter-Area contracts costs per contract cost driver and cost per ft³ and/or piece of transported mail over the last 10 fiscal years. If these data are not available, please explain why.
- d. Please explain the process the Postal Service has in place to acquire vehicles on an as-needed basis, for example, to deliver mail which was not loaded onto a scheduled trip due to delays. Using an example of an Inter-Area trip, please also explain how expense for such ad-hoc trip is determined (what the cost driver is) and whether it is reported in the regular, emergency, or exceptional Inter-Area contracts account.
- e. Please refer to Library Reference USPS-LR-N2021-1/3, April 21, 2021, Excel file "3_SSD_5D_Vol_Impacts_CONUS.xlsx," tab "Finance_Summary Surface," cell D4. For the projected 6.6 percent reduction in mileage for Inter-Area trips, please explain whether this estimate represents a reduction in contracted miles for regular, emergency, and/or exceptional Inter-Area contracts.
 - i. Please describe the impact of the 6.6 percent reduction in Inter-Area mileage on the Postal Service's expenses associated with existing Inter-Area regular contracts for which trips miles would be reduced.
 - ii. Should any of the miles estimated to be eliminated be associated with Inter-Area exceptional contracts, please describe the impact on the Postal Service's expenses.

RESPONSE:

- a. The cost driver for highway is cubic-foot-miles. The price for Inter-Area Highway Contract routes is determined through solicitation of service compliance with the USPS Supplying Principles and Practices. These contracts typically have a period of performance of 4 years.

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- b. HCR contracts include both one-way trips and round trips. Typically, round trips carry mail and / or Mail Transport Equipment in both directions.
- c. The average cost per cubic-foot-mile for Inter-Area Regular transportation was \$0.00066 for FY20. A ten-year trend of this data is not available. However, a four-year trend is provided in the chart below, based on available data.

Fiscal Year	Average Cost per Cubic-Foot-Mile
2020	\$0.00066
2019	\$0.00065
2018	\$0.00064
2017	\$0.00059

Source: Transportation Contract Support System (TCSS), extract from Quarter 4 of each FY

- Neither a cost per cubic foot of Inter-Area transported mail nor a cost per piece of Inter-Area transported mail is available because no existing Postal data system reports the total volume or cubic feet of Inter-Area transported mail that would be needed to form the denominator of these calculations.
- d. Exceptional service is called when needed to move volumes that failed to be loaded on planned transportation. There is a two-tier selection tool designed to solicit suppliers to provide service on an as-needed basis. There are twenty-four (24) individual companies listed within the tool, twelve (12) in Tier-1 and twelve (12) in Tier-2. The tiers are in ranking order based upon a contract rate per mile beginning with the lowest and escalating to the highest. The current range for Tier-1 is \$2.70 to \$3.98 per mile and Tier-2 is \$4.20 to \$7.49 per mile. When there is an

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immediate need for an extra network trip, the request is entered into a SharePoint website, once the questionnaire is completed, a Headquarters Network Analyst begins a solicitation process to secure a supplier to operate/provide the service requested. All Tier-1 suppliers are emailed with the requirements, out of those that respond, the lowest priced per mile supplier is awarded the trip. If no Tier-1 supplier responds, after 60 minutes all Tier-2 Suppliers are emailed and the first responding supplier is awarded the trip. Data is collected regarding trip schedule, origin and destination locations and frequencies to make appropriate adjustments to the network long term. The process is similar for Network extra trips that are scheduled in advance, except the requests go to Tier-2 suppliers for award, they will be awarded in order of the lowest price per mile.

- e. The estimated reduction in mileage does not specify regular, exceptional, or emergency. Implementation could impact all three categories.
 - i. The 6.6% reduction in inter-Area mileage is estimated reduction against a baseline model of transportation required under existing service standards. The estimated cost reductions are described in Whiteman's testimony.
 - ii. Reductions to exceptional service would save the Postal Service in a similar way to reductions to regular contracted service. Exceptional service is typically more costly per mile than regular contracted service.

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Question 18. Please provide information related to expenses and/or penalties associated with poor on-time performance in the air and the surface networks.

- a. Please describe costs associated with poor on-time performance, and describe how these costs, when incurred in the air network, differ from costs incurred in the surface network.
- b. For each of the surface and air networks, please explain whether it is the Postal Service or the supplier of transportation services that bears expenses associated with poor on-time performance, and describe how these expenses are determined.
- c. For each of the surface and the air networks, if relevant, please explain whether the Postal Service can and does assess penalties to suppliers of transportation services for poor on-time performance.

RESPONSES:

- a. Some expenses associated with poor on-time performance for both air and surface are additional workhours and overtime to work late arriving mail and costs to run trips not performed, or to mitigate service failures.
- b. For Surface transportation the Postal Service bears the expenses of poor service. There is no system in place to track these expenses. For air transportation, liquidated damages (reductions in payment) are applied to the carrier's payment based on a scale of incremental reductions and minutes late. Any piece receiving a delivery scan outside of the Required Delivery Time will be determined late resulting in a sliding scale reduction in payment.
- c. There are currently no penalties for poor performance in Surface Transportation contracts. The USPS has specific performance requirements in all of the air contracts. There are also liquidated damages for failure to meet the performance requirements. The performance and payment systems are configured to apply the liquidated damages to the carriers' payments when performance targets are not achieved.

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Question 19. Please refer to USPS-T-3 at 7. The Postal Service describes the modeling as an iterative process in which network efficiencies are maximized. The Postal Service further explains that the iterative process first created a model to optimize origin facility – destination facility pairs (OD Pairs) currently served by surface transportation, then introduced OD Pairs currently served by air transportation into the model, and finally analyzed cost effectiveness of the model's routing results for current air OD Pairs. Please provide information related to the model's iterations.

- a. The Postal Service describes that during the model's first iteration, new service standards were introduced into the model, which resulted in increased transportation window and allowed for efficiency improvements in the modeled network of trips.
 - i. Please describe what transportation efficiencies were accomplished by the model's first iteration. Specifically, provide number of routings in the "baseline network," number of routings in the network which resulted from the model's first iteration, baseline and resulting routings' mileages, as well as baseline and resulting capacity utilizations.
 - ii. Please list all products currently served by surface transportation within Inter-Area, Inter-Cluster, and Inter-P&DC networks, which have similar service standards and require similar transit times as those proposed for First-Class Mail.
- b. The Postal Service describes the model's second iteration as including OD Pairs currently served by air transportation.
 - i. Please provide the percentage of the First-Class Mail volume diverted from the air network that was determined to be able to utilize routings from the model's first iteration and the percentage of the diverted volume determined to require new routings.
 - ii. Please explain what volume, other than the diverted First-Class Mail volume, was modeled to be transported on the newly added routings.
 - iii. Please provide the number of new routings determined to be required, the average routing distance in miles, total miles of all new routings, newly added capacity, and average capacity utilization for the new routings.
- c. During the model's third iteration, new routings from the previous iteration were evaluated for cost effectiveness.
 - i. Please explain whether capacity utilization for new routings was among the factors evaluated when determining these routings' cost effectiveness. Please provide the utilization percentage which constituted satisfactory utilization.
 - ii. Please provide the number of new routings that were determined cost effective and those determined not cost effective, from the model's third iteration. Please describe how routings determined to be cost effective and routings determined not cost effective differed.
 - iii. Please provide an Excel file which includes final transportation mode selected by the Postal Service, outside of the model, for each origin-destination 3-digit ZIP Code pair or each origin-destination facility pair, depending on the level at which mode selection was determined.

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- d. Using two examples of actual Inter-Area, Inter-Cluster, and Inter-P&DC trips, please map these trips to the most relevant OD Pairs. Please also describe similarities and differences between modeled OD Pairs and contracted trips.

RESPONSES:

- a.
 - i. The baseline model using current service standards output 4,073 routings, daily mileage of 2,139,302, and 66% trip utilization. The optimized surface routing model produced 3,566 routings, daily mileage of 1,805,069, 74% trip utilization.
 - ii. The additional products sharing the FCM network and included in the model are: Marketing Mail and Periodicals identified as being transported via First-Class Mail network, International volumes, and Priority.
- b.
 - i. Of the total air volumes diverted to surface routings, approximately 30% of the volume was placed on 676 of the routings defined in the first iteration.
 - ii. The second iteration introduced only FCM air volumes to the model to determine additional routings on the surface network.
 - iii. The number of new established routings to carry air volumes was 1,115 with an average mileage 1,306 and a utilization of 57%.
- c.
 - i. Utilization was not a direct constraint but given that the air cost has a direct relationship with volume, routings with more volume are more likely to be cost effective. In general, longer trips have the higher costs and require more volume to offset the cost of transporting that volume via air.
 - ii. The number of newly established and cost-effective routings to carry air volumes was 319 with an average mileage 453 and a utilization of 82%. In general, new routings that are longer in distance and lower in utilization were less likely to be cost effective.

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- iii. Please refer to the Excel spreadsheet filed under seal within USPS-LR-N2021-1-NP4.

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Question 20. The Postal Service identifies model inputs as volumes, mappings of origin and destination 3-digit ZIP Codes to respective origin and destination processing facilities for all mail classes and shapes, transportation mode currently used for First-Class Mail, shipping containers used, transit times between origin and destination facilities, and costing inputs. Please provide information regarding model inputs.

- a. Please refer to USPS-T-3 at 8. Please explain why the Postal Service used package volumes which pertained to October 2020, First-Class Mail volumes for March 2019 and scaled to March 2020, and all other volumes which pertained to March 2019. Please also explain possible implications of optimizing a network in which mail mix is not representative of mail mix pertaining to one point in time. In your explanation, please address the fact that the estimated gains in efficiencies were partly driven by products of different classes and shapes sharing vehicle space to increase capacity utilization, while identifying more efficient routings.
- b. Please provide the month and the calendar year to which the Wednesday mode matrix used as an input to the model pertains. Please provide additional detail on transportation modes.
 - i. Please refer to USPS-T-3 at 9. The Postal Service states that the Mode Mapping file "designates the approved mode of transportation, air or surface, between every origin and destination pair in the country" and that "the Wednesday mode matrix was used." Please clarify whether by "approved mode" in the quoted sentence, the Postal Service refers to mode approved by the Postal Service on the specific Wednesday or whether it refers to transportation mode approved based on origin and destination facilities' respective clearance time (CT) and critical entry time (CET) as well as on the distances between them.
 - ii. Please explain whether First-Class Mail mode approved based on distance and on CTs and CETs can vary from the mode a mailpiece is assigned to on a given day, and describe what determines this "diversion."
 - iii. Please describe how the Wednesday to which the mode matrix pertains aligns with days to which modeled volumes pertain.

RESPONSES:

- a. Package volume from October 2020 was used to account for the significant increase in package volume observed after the onset of the COVID-19 pandemic. The validated March 2020 3-digit to 3-digit volume file for all products (web ODIN monthly reporting) was not available at the time of the modeling. March 2019 volume data was available, and March represents an average month of the year. The volumes were scaled to account for year over year volume changes. Letter and flat volume

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continue to decline, and we determined this introduces little risk for this high-level model and analysis of the network. The model output was to be used for operational / tactical application, implications of using the March 2019 data set would include misrepresenting certain pair volumes due to shifts in mailer volumes. The estimated gains in efficiency were not driven by the other products modeled, since the other service standards remained constant. All products used to determine the requirements of the FCM and Priority network were modeled in both the baseline and service standard change scenario. The baseline model utilized the same volumes and modeling parameters and adjusted the delivery date of the shipments based on proposed service standards.

- b. i. The Mode Matrix is a reference table in the USPS Distribution Table Management System (DTMS). This table defines the mode of transportation assigned to move volumes between each origin and destination pair in the country, for each product, by day of week. For non-holiday, or peak periods, the mode for each lane remains constant from week to week unless a mode change request is submitted and approved. For modeling purposes, the Wednesday DTMS Mode Matrix for the period prior to the pandemic impact was referenced.
- ii. In general, mode assignments remain consistent for every day of the week. A Wednesday was referenced to stay consistent with the modeled volume days.

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iii. In general, transportation modes do not vary based on days of the week (other than a small subset of exceptions). Selecting Wednesday's mode matrix was simply to align with a representative Wednesday day of the week in the model.

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Question 21. Please refer to USPS-T-3 at 6, 10-17. The Postal Service states that it used Blue Yonder Transportation Modeler optimization software (software) to maximize modeled network's efficiencies, with the objective to minimize transportation miles, while adhering to all parameters and constraints. USPS-T-3 at 6, 10. The Postal Service also describes that the software used a set of instructions on how to perform optimization and provides service standard assignment rules used in the modeling. *Id.* at 11, 13. Please provide information related to the optimization process.

- a. Please explain whether the instructions to the software on how to perform optimization, and included in the various strategy files that the software tested, were given weight, determined by their relative importance within the complete set of instructions, and if so, please list instructions with highest assigned weights.
- b. Please explain whether the software was instructed to eliminate potential routings for which capacity utilizations were low and from which volumes could be "transferred" to available alternative routings.
- c. The Postal Service describes service standard assignment rules utilized in the model. Please explain whether the modeling process started with a "baseline scenario," which was to a certain degree reflective of current Inter-SCF network inefficiencies and current routings, and to which proposed service standards were introduced during the model's first iteration.
- d. The Postal Service states that the model assumed 53-foot trailers, with maximum volume modeled as 1,575 ft³. *Id.* at 15.
 - i. Please provide capacity of a 53-foot trailer (in ft³) and explain what capacity utilization 1,575 ft³ of mail volume in a 53-foot trailer represents.
 - ii. Please explain whether the 1,575 ft³ of mail volume represented modeling input (i.e., less optimal use of truck capacity) or whether it was an instruction for the software, which represented a more optimal use of truck capacity.
 - iii. Please provide truck capacity utilization for modeled Inter-Area, Inter-Cluster, and Inter-P&DC trips before and after optimization was performed.
 - iv. Please provide average capacity utilization for actual Inter-Area, Inter-Cluster, and Inter-P&DC trips in FY 2020. Please also provide average APC container utilization in FY 2020.
- e. The Postal Service states that the software used a vehicle speed of 46.5 miles per hour (mph) to generate transit times. *Id.*
 - i. Please explain whether 46.5 mph speed was used for all modeled trips, including short distance trips (up to 139.5 miles), trips with multiple stops, and trips with portions of traveled distances in urban areas.
 - ii. Please explain whether average vehicle speed, as dictated by trips' characteristics (such as urban/rural area trip, number of stops per trip, vehicle load) is considered when HCR contract amounts are determined. If vehicle speed (or travel time) is considered, please describe how it is determined/what values are used.
 - iii. Please explain whether the Postal Service assumed maximum combined driving distance between origin and destination processing facilities within

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the contiguous United States, above which First-Class Mail volume could not be delivered within the five-day service standard transit window and for which First-Class Mail volume was assigned to air transportation based solely on this distance.

- f. Please refer to USPS-T-3 at 16-17. The Postal Service describes slack time added to transit time, and made possible due to increased transportation window, as allowing pairing of shipments at the origin and additional stops. The Postal Service also describes origin dispatch times used in the model as based on 95th percentile machine end times plus 90 minutes or 3:30, whichever was earlier. Lastly, the Postal Service states that destination CETs are product- and shape-based, specifically 8am for letters/flats and 8pm for parcels. Please provide information related to origin dispatch times, destination entry times, and how they contributed to more efficient routings for Inter-Area, Inter-Cluster, and Inter-P&DC trips.
 - i. Please explain whether 95th percentile for machine end times plus additional 90 minutes were used as modeling inputs and whether the software was instructed to add any slack time at origin to allow for pairing of shipments at that stage (in particular for "all drops and one pick" trips).
 - ii. Please explain why the model used the *earlier* of 3:30 or machine end time + 90 minutes, and whether this assumption could have resulted in unrealistic origin dispatch times and may have prevented pairing of shipments at origin.
 - iii. For each of Inter-Area, Inter-Cluster, and Inter-P&DC categories, please provide the most common dispatch time at origin before and after network optimization was processed.
 - iv. Using an example, please explain how different CETs for letter-/flat- and parcel-shaped mail, combined with added slack times, which benefit only First-Class Mail and end-to-end Periodicals volumes, allow for shared truck space for letter/flat and parcel volume, *i.e.*, for increased capacity utilization.
 - v. Please provide average truck space in Inter-Area, Inter-Cluster, and Inter-P&DC network used by Priority Mail and First-Class Package Service volume in FY 2020.
 - vi. The Postal Service describes that trips were modeled as non-stop or multi-stop trips, with a maximum of three stops allowed for the latter (one stop at a Surface Transfer Centers plus two extra stops). Please explain whether the baseline network assumed only non-stop trips or trips with fewer than three stops and whether some of the modeled efficiency gains stem from stops that were added during optimization process, owing to the increased transportation window. Please also explain whether additional stops would result in increased mileages for routings.
- g. Please describe whether mail weight, mail capacity (ft³), or both were used to determine costs of fuel for the routings evaluated by the software.
- h. Please list modeling instructions that most contributed to the estimated reduction in mileages for Inter-Area, Inter-Cluster, and Inter-P&DC trips.

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- i. Please list existing Inter-SCF inefficiencies not accounted for in the optimization process.

RESPONSE:

- a. The software does not prioritize one instruction set over the other. Rather, it builds an entire solution universe based on all instruction sets and then compiles a solution that minimizes both mileage and trips.
- b. The software is not instructed to eliminate any volumes or routings based on utilization. The software is required to route all volumes in the most efficient way that reduces both trips and mileage.
- c. The baseline scenario was modeled with current state service standards using the same instruction set from the proposed service standards model. Both the baseline and proposed scenarios present an optimal network based on the respective business rules.
- d.
 - i. A 53' trailer is 9 feet tall and 8 feet wide and has an internal volume of 3,816 ft³. The 1,575 ft³ modeled represents the current postal standard of 42 All-Purpose Containers (APCs) at 37.5 ft³ each.
 - ii. The capacity of 1,575 ft³ was a constraint used by the software to determine the maximum amount of volume that can go on any trip. This capacity is an estimate of usable trailer capacity utilizing USPS Mail Transport Equipment (MTE).
 - iii. The overall current network utilization approximately 40%. We do not track current utilization in those specific categories. The modeled utilization following the optimization was 77.4%. This includes the surface routings and any routings added to move air volumes.

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- iv. The overall current network utilization approximately 40%. We do not track current utilization in those specific categories.
- e. i. No, the transit speed of 46.5 mph was used for modeled trips up to an including 1,000 miles. Trips over 1,000 miles were modeled using 55 mph. Certain metropolitan areas were adjusted to account for slower transit speeds.
- ii. Vehicle speed is used to determine transit times between termini. The requestor of an HCR change will typically use the standard speed of 46.5 mph. If it is a modification of an existing contract with a trip in the lane, the existing travel time will be reviewed and used if the contractor performance shows on-time arrival. If there are other similar trips in the lane, other contracts may be referenced for travel time, as well. If the supplier has an issue with the transit time proposed, the lane and supporting data will be examined more closely to assess impacts due to time of day and traffic, traffic lights, local speed limits, etc.
- iii. A maximum time and distance was not used to assign volume to air.
- f. i. The 95th percentile machine end times plus 90 minutes was used as a modeling input for each origin facility. This method was used to establish an earliest ship time. The model was used to determine the optimal departure time within the transit window constraints. In addition, the model also uses a 30 minutes load/unload time.
- ii. 03:30 was selected as a cut-off time for departing volumes from a feeder facility to an aggregate facility, not from the aggregate sites to the outbound network. Where small facilities feed larger facilities to consolidate volumes for the network, we needed to determine reasonable dispatch times. Many small facilities clear earlier than the larger facilities, and it was necessary to estimate

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the volume availability for dispatch from the larger sites receiving and consolidating volumes from smaller feeder sites.

iii. The current average dispatch time from origin from February 2021 through May 14th, 2021, between 00:00 and 12:00 is 04:48am. The average modeled dispatch time from origin facilities is 06:07am. The information available is not summarized by inter-area, inter-cluster, and inter-P&DC.

iv. Currently, 3-day First-Class letter and flat volumes have an expected delivery time of 0800 day-2 and 3-day FC parcels have a CET of 2000 day-2. Parcels have an additional 12-hours of transit window available to take advantage of surface transportation where the FCM would have to fly to arrive by CET. When we expand the First-Class letter and flat mail transit window times and shift 3-day to 4 and 5-days, this provides significant opportunities for the Letters/Flats to ride along with the parcels.

v. This data is not available. However, based on the average Inter-SCF utilization (45 percent) and the percent of Inter-SCF cubic-foot-miles attributed to domestic competitive products as measured by TRACS, a reasonable estimate is that in FY20, 26.1 percent of space on Inter-SCF transportation was used by domestic competitive products. Inter-SCF contracts include Inter-Area, Inter-Cluster, and Inter-P&DC contracts.

vi. The baseline model was allowed the same amount of stops as the proposed model. The increase in transportation window in the proposed model increases the opportunity and ability to build more efficient multi-stop trips. Additional stops allowed would decrease overall mileage; however, testing determined that

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anything over three stops was offering diminishing returns compared to the increase in trip complexity.

- g. Mail weight and mail capacity were not used in the cost of fuel. The modeled rate per mile is based on current national rates.
- h. The modeling instructions that had the most influence on the results where the multi-stop instruction set and the Hub (STC) assignment and routing instruction set. Specifically, when looking at the strategy file, the HubAssign and HubMove functions pairs with the ReOptTLLoads and OptTLLoads.
- i. I am unable to identify the inter-SCF inefficiencies not accounted for in the optimization process.

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Question 22. Please describe inefficiencies present in the Inter-Area, Inter-Cluster, and Inter-P&DC networks and identify those that could be improved without the implementation of the proposed service standards for First-Class Mail, which result in increased transportation window for First-Class Mail and end-to-end Periodicals volumes only.

RESPONSE:

Inefficiencies present throughout the network are largely driven by the service standards necessitating point-to-point routings exist between all surface lanes and trips must operate on a daily frequency regardless of volume. There are opportunities to improve utilization based on lane density and eliminating trips and adjusting frequency in under-utilized lanes with multiple trips per day.

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Question 23. Using examples, please describe the direction and potential magnitude of the impact of the following factors, which remain to be evaluated, on the estimated reductions in Inter-Area, Inter-Cluster, and Inter-P&DC mileages.

- a. Trips were modeled as one-way
- b. Relationships with transportation outside the scope of the model
- c. Site-specific operational nuances
- d. Department of Transportation requirements

RESPONSE:

- a. Trips modeled as one-way will need to be paired with return trips by the transportation planning team prior to implementation. Failing to find return trips to pair with one-way trips could escalate the rate per mile.
- b. Priority Mail Express (PME), and Mail Transport Equipment (MTE) was not included in the model, and certain transportation between pairs used for PME and realigning MTE. During implementation, these other products will need to be considered and may inhibit the ability to reduce mileage in certain cases.
- c. Specific operational constraints, such as yard and dock throughput constraints, processing constraints driving volume arrival profile requirements may require adjustments to the implementation planning to help sites be successful. This could force adjustments to departure times and in some cases inhibit pairings with other volumes. Given the extended transportation windows and ability to adjust dispatch times and arrival times, the impact risk is low.
- d. The mile-per-hour rates used in the modeling generally allow time for DOT required breaks. Given the extended transportation windows and ability to adjust dispatch and arrival times, the impact risk is low.

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Question 24. Please explain whether the estimated reduction in mileage is expected only in the first year the proposed service standards would be implemented (FY 2022). Please provide additional information related to cost savings and future plans for network improvements.

- a. Please provide an estimate of the air and the surface network cost savings pertaining to FY 2022, the first full fiscal year with new First-Class Mail service standards in place.
- b. Please describe other highway networks where optimization process is ongoing or planned, the focus of these efforts, and these networks' main cost drivers.
- c. In USPS-T-1, witness Cintron states that "after extending service standards [for First-Class Mail] by one or two days within the contiguous United States, the Postal Service will establish an expanded surface network for First-Class letters and flats, capable of reaching coast to coast" and that this coast to coast First-Class Mail network would then be merged with the existing Inter-National Distribution Center (NDC) network, currently dedicated to transporting end-to-end Marketing Mail, Periodicals, and package service products. USPS-T-1 at 28-29.
- j. Please explain whether First-Class Mail volume traveling from coast to coast would arrive at destination facility within the five-day service standard maximum transit time.
- ii. Please confirm that surface network impact of this new coast to coast First-Class Mail network is not included among the materials filed in the instant docket.
- v. Please discuss how network changes considered/modeled in the instant docket are aligned with and lead to this eventual coast to coast First-Class Mail network.

RESPONSE:

- a. \$175M to \$279M
- b. Long-haul Network Optimization is evaluating lanes with multiple trips for reduction opportunities based on average trip utilization. They also review one-way trips and identify pairing opportunities to reduce trips and reduce rate per mile.
- c. i. Yes, First-Class Mail traveling coast to coast would arrive at destination facility within the 5-day service standard. Departing at 0400 day-1 and arriving by 0800 day-4 and subtracting three hours for time zones traveling west to east, allows 73 hours of transit time. 73 hours traveling at 46.5

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mph gives an upper limit of roughly 3,394 miles. Los Angeles to Boston is approximately 2,983 miles, leaving approximately 8 to 9 hours of time for transfers.

ii. The impact of merging the NDC network and FCM network is not included in this docket.

iii. Extending the FCM service standards to allow coast to coast reach will allow NDC network volumes to share space on this transportation and reduce overall network requirements. Instead of maintaining two parallel networks, network efficiencies could be realized by merging the two.

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Question 25. Please explain the impact of the proposed service standard changes on Outbound First-Class Mail International and Inbound Letter Post volume, revenues, costs, and service performance. For the Inbound Letter Post, please include expected impact on bonuses/supplementary remunerations earned on the basis of on-time performance.

RESPONSE:

Please refer to the file filed under seal in USPS-LR-N2021-1-NP7.

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Question 26. Please refer to Library Reference USPS-LR-N2021-1/3, Excel file "3_SSD_5D_Vol_Impacts_CONUS.xlsx," tab "Finance_Summary Surface."

- a. Please explain whether the values included in columns B and C of the referenced tab represent mileages per day or mileages per year, for Inter-Area, Inter-Cluster, and Inter-P&DC contracts. If the values are annual mileages, please explain what factor the Postal Service used to calculate annual mileages from daily mileages and how this factor was determined.
- b. For each of the Inter-Area, Inter-Cluster, and Inter-P&DC contract categories, please provide annual capacities (ft³) and annual mileages that represented modeling inputs, those that were produced from the first iteration of the model (*i.e.*, solely due to introduction of the proposed service standards), and those which resulted from the model's second iteration (with new surface routings added to the modeled network for some of the diverted First-Class Mail volume).
- c. Please explain whether any miles which were eliminated during the modeling process were associated with eliminated trips.

RESPONSE:

- a. The numbers represent daily mileages. To annualize daily transportation mileage, an annual frequency of 307 days per year is applied, which is daily except Mondays and days after holidays other than Martin Luther King Jr.'s Birthday, Presidents' Day, Columbus Day and Veterans Day.
- b. These categories and annual capacities are not used as a modeling input and are not produced after the first iteration, only after the second iteration and Air to Surface cost evaluation. The annualized numbers from the second iteration are as follows:

	Baseline (Current SSD Model)	5 Day	Comparison Metrics (Delta to baseline)
Finance Category	Annual Mileages	Annual Mileages	% Mileage Difference
Inter-Area	509,879,722	476,207,102	7%
Inter-Cluster	137,330,310	132,358,414	4%
Inter-P&DC	9,555,559	8,865,393	7%
Grand Total	656,765,591	617,430,909	6%

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- c. The model produced an overall 507 trip reduction from the baseline (3,566 from 4,073) in the first iteration. 319 trips were added after the second iteration for a total of 3,885. Overall mileage reductions are attributed to both trip elimination and trip re-structuring.

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(REDIRECTED IN PART FROM WITNESS WHITEMAN)
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 2**

Question 9. Please refer to USPS-T-2 at 14. The Postal Service estimates annual net savings of \$279.6 million, less the estimated net decrease in annual contribution of \$104.8 million, for an annual estimated improvement in net income of \$174.8 million.

- a. Please discuss whether the Postal Service has calculated implementation costs for the proposed changes.
- b. Please provide any documentation and calculation for the implementation costs, if available.

RESPONSE:

- a. It is estimated that systems updates would cost approximately \$550,000. Other implementation costs beyond the \$550,000 already estimated for systems updates would be minor in nature including some overtime hours performed by existing staff.
- b. Please see USPS-LR-N2021-1-15. Employee user ID numbers have been redacted from the file.

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Question 10. Please refer to USPS-T-3 at 6, where you state "This portion of my testimony describes the evaluation of how the proposed service standard modification allows for additional transport time and increased efficiencies across the network for FCM and end-to-end Periodicals."

- a. Please define "efficiencies across the network" as used in this sentence.
- b. Please identify any inefficiencies you suspect may occur due to the proposed changes.

RESPONSE:

- a. "Increased efficiencies across the network" refers to shifting volumes to more cost-effective modes of transportation and reducing surface transportation requirements between origin and destination pairs. By adding time to the transportation window, more destinations can be combined into trips, improving utilization, and reducing the number of trips otherwise needed in the current environment.
- b. Inefficiencies that may occur as a result of the proposed changes include shifting lanes from air to surface that may not or no longer have volume to warrant surface transportation, and increases in Surface Transfer Center operations to cross-dock and build full trailers and reduce trips.

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Question 11. Please refer to USPS-T-3 at 7, where you state, "The iterative process first created a model to optimize the current surface pairs...." Please explain whether this first iterative step or any subsequent iterative steps in the transportation model altered the number or location of processing facilities, or whether the facilities/nodes in the transportation network reflect the current number and location of facilities/nodes remained constant through all iterations of the model?

RESPONSE:

The number of nodes remained constant through all iterations of the model.

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Question 12. Please refer to USPS-T-3 at 8.

- a. Please explain how you calculated the estimated costs for surface trips (\$2.50 per mile) and air transportation (\$7.50 per cubic foot).
- b. Please provide calculations for estimated costs of surface trips and air transportation annually from FY 2015 through FY 2020.

RESPONSE:

- a. The estimated cost for each surface trip lane added to transport air volumes was estimated using \$2.50 per mile, multiplied by the mileage for that trip. For multiple leg trips, the longest leg was used in the assessment, which was typically from origin to destination STC. The cost of the trip was compared to an estimated cost of flying the volume. The cost of flying the volumes was based on \$7.50 per cubic foot and multiplying that rate by the raw cubic feet conversion of the volume being transported on that lane. The conversion from pieces to cubic feet was based on the percent load of each container multiplied by 37.5 cubic feet per container.

FY	Air Cost (\$000s)	Surface Cost (\$000s)
15	2,150,802	3,655,529
16	2,468,660	3,881,522
17	2,481,219	4,126,054
18	2,892,521	4,357,996
19	3,069,965	4,557,826
20	3,459,879	4,798,463

- b. Source: Public Cost Segments and Components, CS14

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Question 13. Please refer to USPS-T-3 at 10 and 15, where you indicate that volume conversions to All Purpose Containers were limited to 75 percent capacity to prevent unrealistic containerizations of 100 percent capacity.

- a. Please explain why 75 percent capacity is a realistic assumption.
- b. Please provide any quantitative support developed to support the 75 percent assumption.

RESPONSE:

- a. 75 percent capacity of the containers was used to be conservative and account for additional containers that may be generated from multiple operations for the same destination.
- b. No quantitative support was developed to support the 75 percent assumption.

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Question 14. Please refer to USPS-T-3 at 13, where you explain that many mail processing facilities are not able to dispatch mail by 02:00 because they are not capable of dispatching that early. Please explain the reasons why a facility would not be capable of meeting a 02:00 dispatch time.

RESPONSE:

Many factors can contribute to a facility not being capable of meeting a 02:00 dispatch time, including: mail arrival profiles impacted by transportation delays, equipment reliability issues, staffing availability issues, planning and volume forecast error, mail preparation and readability issues, integrated dispatch and receipt throughput constraints, and delays in upstream operations impacting clearance of subsequent operations.

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Question 15. Please refer to USPS-T-3 at 14, where you state that the proposed standards will allow for up to 4 hours to conduct a transfer at a hub facility.

- a. Please provide a national average (or estimate with an explanation if no average is available) of the current time required to execute a hub transfer.
- b. If the average or estimate is calculated, please provide all source material used to make that calculation.

RESPONSE:

- a. A minimum of two hours is required to transfer volumes through a Surface Transfer Center (STC). Additional time, varying by origin and destination pair, is needed to route to and from an STC versus a direct trip. The total estimated average time currently needed to route and transfer volumes through an STC is 6.09 hours. The average dwell time at the STC is 4.14 hours and the deviation to the STC versus a direct routing adds an average of 90.7 miles, or 1.95 hours.
- b. Please see the Excel spreadsheet in USPS-LR-N2021-1-17.

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Question 16. Please refer to USPS-T-3 at 15, where you identify a number of modelling constraints, such as “[m]ulti-stop trips were allowed with a maximum of two extra stops,” and “trips were structured as ‘all picks and one drop’ or as ‘all drops and one pick.’” Please explain how each of these assumptions compares to the reality of the Postal Service’s existing transportation network.

RESPONSE:

The constraints in the model were based on realities of the Postal Service’s existing network.

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Question 9. Please refer to Response to POIR No. 1, question 19.a.i., which states "The baseline model using current service standards output 4,073 routings, daily mileage of 2,139,302, and 66% trip utilization." Please compare the outputs of the baseline model to the actual transportation used by the Postal Service. Please provide the actual routes, daily miles, and trip utilization for the March 2020 period.

RESPONSE:

Surface Visibility data for March 2020 showed the Postal Service operated an average of 6,308 trips per day with an average utilization of 39% and an average daily mileage of 2,406,448. Note that the data was filtered to isolate transportation between the nodes in the model carrying products modeled to remove transportation outside the scope of this proposal.

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Question 10. Please provide another example of a project where the Postal Service has used the Blue Yonder modeling software to identify cost savings opportunities. Please discuss the projected cost savings and the actual cost savings of this project, and detail both how the projection was developed and the actual cost savings were measured.

RESPONSE:

The Postal Service used the Blue Yonder modeling software to model morning Highway Contract Routes (HCR) transportation, shifting from pre-determined static trips to volume-based trips that are dynamically planned. Projected savings was 12.5% reduction in mileage. Actual savings is calculated by comparing the baseline rate per mile and mileage to the new mileage and rate per mile. The savings calculation takes into consideration fuel increases/decreases as well as inflation. The mileage is simply compared to the baseline month (baseline before optimization) to the current mileage. The actual savings for the example sites is in the table below:

		Savings	% Savings	% Mileage Savings
<u>Fort Myers</u>	FY19 Q3 - FY21 Q2 (Dynamic)	110,955.67	9.77%	11.60%
<u>Burlington</u>	FY19 Q3 - FY21 Q2 (Dynamic)	136,719.63	22.31%	11.93%

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Question 11. Please refer to Response to POIR No. 1, question 24. Please explain whether the estimated reduction in mileage is expected only in the first year the proposed service standards would be implemented (FY 2022). Please provide additional information related to cost savings and future plans for network improvements.

RESPONSES:

The changes resulting in mileage reductions are expected to be implemented the first year. The benefit of those improvements will remain in effect in subsequent years and will set a new baseline network for the United States Postal Service for future transportation related improvement efforts. After implementing the extended surface First-Class Mail network, additional savings are expected related to consolidating the NDC to NDC network, as described on page 29 in United States Postal Service, Delivering for America: Our Vision and Ten-Year Plan to Achieve Financial Sustainability and Service Excellence (2021).

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Question 12. Please refer to the Response to POIR No. 1, question 24.a. Please provide the source for the estimated cost savings of \$175 M to \$279 M in FY 2022. Please explain how long it will take to realize the full cost savings from this project, and how the Postal Service plans to measure how savings are realized.

RESPONSE:

The methodology for calculating the estimated savings is described in the testimony of witness Whiteman (USPS-T-2, pages 8 – 14). Savings are expected to be realized in year one, and the Postal Service tracks savings expectations for all major initiatives. Annual HCR costs will be pulled at the start of implementation and throughout to monitor annual contract cost reductions of existing transportation and any additions. Volume data for lanes shifting from Air to Surface will be recorded and savings estimates tracked separately to compare against new lanes implemented to move air-to-surface volumes.

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Question 13. Please confirm that one outcome of the proposal will be to increase the crossdocking and dispatch costs at Surface Transfer Centers. If not confirmed, please explain. Please identify where the extra cost associated with increased workload at Surface Transfer Centers are calculated.

RESPONSE:

The implementation will result in more volume transferring via Surface Transfer Centers.

Cost increases associated with the increased workload at the STCs were not a factor in routing determination; however, prior research indicates that implementation is not expected to significantly exceed current capabilities of these locations.

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Question 14. The Postal Service explains that the current FCM service standards account for surface transit times with respect to one-day and two-day service standards, but not for service standards of three or more days. USPS-T-1 at 18. The Postal Service explains further that the one-day service standard applies to intra-SCF Presort FCM properly accepted before the day-zero CET, and that the two-day service standard applies to intra-SCF single piece domestic FCM properly accepted before the day-zero CET, as well as to inter-SCF domestic FCM properly accepted before the day-zero CET, if the drive time between the origin P&DC and destination SCF is 6 hours or less.

Id. Please refer to Library Reference USPS-LR-N2021-1/3, Excel file

"3_Zip3_OD_Pairs.xlsx" (3-digit ZIP Pairs file), tab "OD_Contiguous" and Excel file

"3_SSD_5D_Vol_Impacts_CONUS.xlsx" (Modeling results file), tab

"FCM_Contiguous_Impact."

- a. Please confirm that intra-SCF domestic Presort FCM, intra-SCF single piece domestic FCM, and inter-SCF domestic FCM volumes were included in the model as volumes subject to the current two-day service standard (i.e. volume with "FCM_SSD"=2 in the 3-digit ZIP Pairs file).
- b. Please explain whether intra-SCF domestic Presort and intra-SCF single piece domestic FCM volumes are transported only within respective SCFs. Please also explain whether these volumes, if included in the model, were modeled as travelling 0 miles, with 0 hours of transit time between origin and destination facilities, in the modeled inter-SCF network.
- c. Please confirm that the reduced geographic reach of two-day origin- destination pairs (OD Pairs) under the proposed two-day service standards would have no impact on intra-SCF FCM volumes currently subject to one- and two-day service standards, and would only reduce the inter-SCF single piece domestic FCM volume subject to a two-day standard. If not confirmed, please explain.

Additionally:

- i. Please confirm that the value in the Modeling results file, tab "FCM_Contiguous_Impact," cell C4, includes intra-SCF domestic Presort FCM, intra-SCF single piece domestic FCM, and inter-SCF single piece domestic FCM volumes within 3 hours drive time between OD Pairs. If not confirmed, please explain. Please also isolate separately the inter-SCF single piece domestic FCM volume which is included in cell C4.
- ii. Please confirm that the value in cell C5 includes inter-SCF domestic FCM volumes with 3 to 6 hours of drive time between OD Pairs. If not confirmed, please explain.
- iii. Please explain the volume in cell C6, which pertains to 1 OD Pair.
- d. Please explain whether the Postal Service expects to employ more or less direct transportation for volumes within 3 hours drive time of origin. Please identify the current surface and transportation costs of inter-SCF First-Class subject to the proposed and current two-day service standard, and the projected change to this mail after implementation of this proposal.

RESPONSE:

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- a. Confirmed. Turnaround volumes that do not impact the network were excluded from the Transportation Model, but were included in the impact analysis.
- b. Please see response to 14.a.
- c. Not confirmed. In SCFs where the originating volume is processed in a facility greater than 3-hours drive time, intra-SCF volume would be 3-day under this proposal.
 - i. Confirmed
 - ii. Confirmed
 - iii. The downgrade from 2-day to 4-day is Casper WY to Rapid City SD. Rapid City is an SCF, serviced by Sioux Falls SD ADC. Based on the business rules proposed, where travel time is based on OPDC to DADC to DSCF, this line of travel sums to 932.8 miles and just over 20 hours of travel time.
- d. The Postal Service does not have specific cost estimates for Inter-SCF First-Class two-day lanes. The Postal Service does not expect to employ more direct transportation for volumes within 3-hours drive time from origin.

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Question 15. Please see Attachment, filed under seal

RESPONSE:

Please see USPS-LR-N2021-1-NP9.

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Question 16. The Postal Service states that the overall current network utilization is approximately 40 percent. Response to POIR No. 1, question 21.d.iii-iv. The Postal Service also explains that the maximum trailer utilization modeled was 41 percent (1,575 ft³ / 3,816 ft³). Response to POIR No. 1, question 21.d.i.-ii. Please explain how the following utilizations were accomplished/calculated:

- a. For the baseline network in which current service standards applied, trip utilization was 66 percent. Response to POIR No. 1, question 19.a.i. Please explain the 22 percentage point difference between actual average utilization and utilization in the baseline network. Please also explain how 66 percent utilization is possible with a constraint of a maximum modeled capacity utilization of 41 percent.
- b. Please explain the 74 percent trip utilization which resulted from model's first iteration, considering the 41 percent trailer utilization constraint referenced above. Response to POIR No. 1, question 19.a.i.
- c. Please explain the 82 percent trip utilization for the new routings, established to carry FCM diverted from the air network and determined to be cost effective. Response to POIR No. 1, question 19.c.ii. In your explanation, please address both the 41 percent trailer utilization constraint and the fact that only FCM volume was added to the model during the second iteration. Responses to POIR No. 1, question 19.b.ii.

RESPONSE:

Network utilization is calculated by floor utilization, or the number of containers that can be loaded into a trailer or truck, single layer. Container scan data is used to calculate the load percentage, or utilization of a trip. The network utilization at the time the testimony was developed was approximately 40%.

Cubic-foot capacity of a 53-foot trailer is approximately 3,816, based on the dimensions of the trailer. 42 All-Purpose Containers can fit on a 53' trailer and can hold approximately 1,575 cubic feet of mail volume. 42 APCs loaded on a 53-foot trailer would show 100% utilization for that trip.

- a. The baseline model with current service standards is optimized using the same constraints as the proposed service standard change scenario allowing it to produce a transportation solution greater than the current state. The model calculations are also not dependent on scanning compliance. As

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stated above in response to 16, a full truck is considered 1,575 cubic feet ,
based on the maximum containers that can fit in a trailer. 3,816 cubic feet
capacity is theoretical maximum in a trailer.

- b. The model is not constrained to 41% floor utilization used to measure network capacity.
- c. The increase in utilization is due to the model layering in additional First-Class Mail volumes onto the pre-existing trips from the first iteration. In addition, the dedicated lanes traveling longer distances require higher utilization to be more cost effective than air.

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Question 17. Please provide information related to Highway Contract Route (HCR) contracts and the estimated reduction in mileage, as requested below.

- a. Please explain how a need for extra trip can be determined, and extra trip scheduled, in advance. See Response to POIR No. 1, question 17.d.
- b. Please explain whether the Postal Service relies completely on regularly scheduled trips, under HCR contracts with typical duration of about 4 years, to accommodate the separate networks for separate products or whether it relies, and to what extent, on extra trips, scheduled on an as- needed basis and/or scheduled in advance, to accommodate such separate networks. See USPS-T-3 at 6.
- c. The Postal Service explains that the implementation of more efficient routings with reduced mileage, "could impact" regular, exceptional, or emergency highway contracts. Response to POIR No. 1, question 17.e.
 - i. Considering the projected mileage reduction could impact regular, exceptional, or emergency contracts, please explain why expenses in General Ledger accounts 53619, 53615, and 53611 for Inter- Area, Inter-Cluster, and Inter-P&DC exceptional trips were not included in baseline costs of surface network to calculate savings. See USPS-T-2 at 12-14; Responses to POIR No. 1, question 17.d.- e.
 - ii. Please explain potential challenges the Postal Service might face when implementing new routings with reduced mileages for trips under regular HCR contracts, which are typically in effect for 4 years. Please compare those with the ease of reducing mileages for exceptional trips.
 - iii. Please describe whether elimination of extra trips within inter-SCF network, currently scheduled to mitigate plant processing delays, delays associated with dock operations, or personnel issues, would be the first action the Postal Service would take once new service standards (enabling the Postal Service to accommodate such delays) are implemented.
 - iv. Please provide the total mileage for extra trips scheduled in inter- SCF network in Fiscal Year 2020. Please also provide average inter-SCF extra trip distance in FY 2020.

RESPONSE:

- a. Extra trips can be scheduled in advance when receiving offloads, or a mailing that is particularly heavy to certain destinations, supplier issues known in advance, and holiday plans to collect volumes or move volumes out of a plant to delivery.
- b. The Postal Service relies on regularly scheduled transportation. Extra trips are to supplement and / or cover gaps in the regular scheduled transportation plan.

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c.

- i. The expenses in these accounts for Inter-Area, Inter-Cluster, and Inter-P&DC exceptional trips were not included in the baseline costs to calculate the savings because, due to their nature, exceptional trips are unpredictable and cannot be reliably modeled. The savings presented are therefore conservative in the sense that any reduction in exceptional service resulting from the proposed service standard changes would only increase the potential savings.
- ii. Modifying contracts is not a challenge, however there is some risk with any contract change that the rate per mile could increase. Extra trips reduction would result in savings without risk of rate per mile increases.
- iii. Late trips routinely called due to late processing could be eliminated provided the regular scheduled trips have sufficient capacity and can be adjusted to depart later. This will be one of the first actions the Postal Service takes to start capturing savings.
- iv. FY20 SV Network HCR extra trips:
 - Estimated Total Mileage: 42,960,787/year
 - Average Mileage Per Trip: 259.3 miles (sample size: 165,648)

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Question 18. Please refer to Response to POIR No. 1, question 19.d., which states “Using two examples of actual Inter-Area, Inter-Cluster, and Inter-P&DC trips, please map these trips to the most relevant OD Pairs. Please also describe similarities and differences between modeled OD Pairs and contracted trips.”

RESPONSE:

The model uses the same OD pairs that exist for current contracted trips. The model is not constrained to follow the same routings as the existing trips and will build its new routings in the most efficient way to reduce mileage and costs.

Category	Origin Area	Origin District	Destination Area	Destination District	Origin Name	Destination Name
Inter-Area	Western (E)	Dakotas	Southern (G)	Louisiana	Great Falls P&DC	New Orleans LA P&DC
Inter-Area	Southern (G)	South Florida	Eastern (C)	Western New York	Royal Palm FL P&DC	Buffalo NY P&DC
Inter-P&DC	Western (E)	Dakotas	Western (E)	Dakotas	Rapid City SD P&DF	Billings MT P&DC
Inter-P&DC	Northeast (B)	Greater Boston	Northeast (B)	Greater Boston	Central Massachusetts P&DC	Brockton MA P&DC
Inter-Cluster	Western (E)	Salt Lake City	Western (E)	Arizona	BOISE ID P&DC	Tucson AZ P&DC
Inter-Cluster	Eastern (C)	Ohio Valley	Eastern (C)	Western Pennsylvania	Columbus OH P&DC	Pittsburgh PA P&DC

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Question 19. Please refer to Response to POIR No. 1, question 19.a.ii.

- a. Please list all products included in "International volumes"
- b. Please list all products included in "Priority"
- c. For all products in a. above, provide current service standards.
- d. For all products in b. above, provide current service standards.

RESPONSE:

- a. Inbound/Outbound Letters, Flats, and Packets
- b. Parcels and Flats.
- c. Outbound International First-Class Mail and Inbound letter post letters and flats follow the First-Class mail domestic service standards to and from the International Service Centers. Refer to the 3-digit pair file submitted with POIR No1 with mode for the service standards.
- d. Please see file in USPS-LR-N2021-1-23.

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Question 20. Please refer to Response to POIR No. 1, questions 26.b. and 19.a. – 19.c.

The Postal Service provides the number of routings in the baseline model (4,073), optimized surface routing model (3,566), proposed new routings to carry air mail (1,115), and new routings determined cost-effective (319).¹² The Postal Service also provides estimates of trip utilization in the baseline model (66%), optimized surface routing model (74%), trip utilization for the proposed new routings (57%), and for the new routings determined cost-effective (82%). Lastly, the Postal Service reports routings' mileages in the baseline network and in the network which includes all projected changes associated with the proposed service standards for FCM, for each of Inter-Area, Inter-Cluster, and Inter-P&DC contract categories.

- a. Please explain the difference, if any, between a routing and a trip. In your explanation, please include whether a routing and a trip has daily/annual frequency attributed to it.
- b. Please provide the number of routings to which reported mileages for each contract category provided in response to question 26.b. pertain.
- c. If a routing and a trip are not equivalent (do not have same attributes), please provide number of trips per day to which reported mileages for each contract category provided in response to question 26.b. pertain.
- d. Please explain whether it is possible to determine modeled vehicle capacities for each contract category (question 26.b), considering mileages are determined from the number of routings/trips and modeled trailer capacity is known (53' trailers used in the model). If possible to determine, please provide total vehicle capacities in cubic feet associated with daily routings for each contract category.

RESPONSE:

- a. A route and trip in terms of the modeling are the exact same, 319 cost effective routings = 319 cost effective trips. This will include and count multiple trips/routings between the same OD pairs. The estimated trips/routings are daily and are assumed to operate every day.

Category	Trips (daily)
Inter-Area	2,306
Inter-Cluster	1,356
Inter-P&DC	411
Grand Total	4,073

- b.
- c. Routes and Trips are the same in this context so there would be no difference in the metrics.

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Category	Trips	Total Capacity (ft3)
Inter-Area	2,306	3,631,950
Inter-Cluster	1,356	2,135,700
Inter-P&DC	411	647,325
Grand Total	4,073	6,414,975

d.

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Question 21. Please refer to Response to POIR No. 1, question 23. For each potential impact described in a. through d., please specify whether any of the two-, three-, four-, and five-day service standard FCM volumes would be more likely affected, and whether any of these volumes would be least likely affected by these potential impacts.

RESPONSE:

Volumes traveling farther distances (4- and 5-day) are more likely to be impacted by the ability to form round trips. Long distance pairs are also more likely to be impacted by the miles-per-hour assumption and the Department of Transportation rules. Despite these risks, the transportation windows account for additional time to mitigate these risks.

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Question 22. Please refer to the Response to POIR No. 1, question 22. Please provide the number of point-to-point routings in the baseline network and the in the projected network. Please quantify how the proposal will decrease the inefficiencies of the transportation network by decreasing point-to point trips.

RESPONSE:

The baseline model produced 1,896 point-to-point trips while the proposed service standard change scenario produced 1,338 point-to-point trips. The point-to-point trips reduce and the utilization increases due to the ability to transfer mail volumes via consolidation points (STCs).

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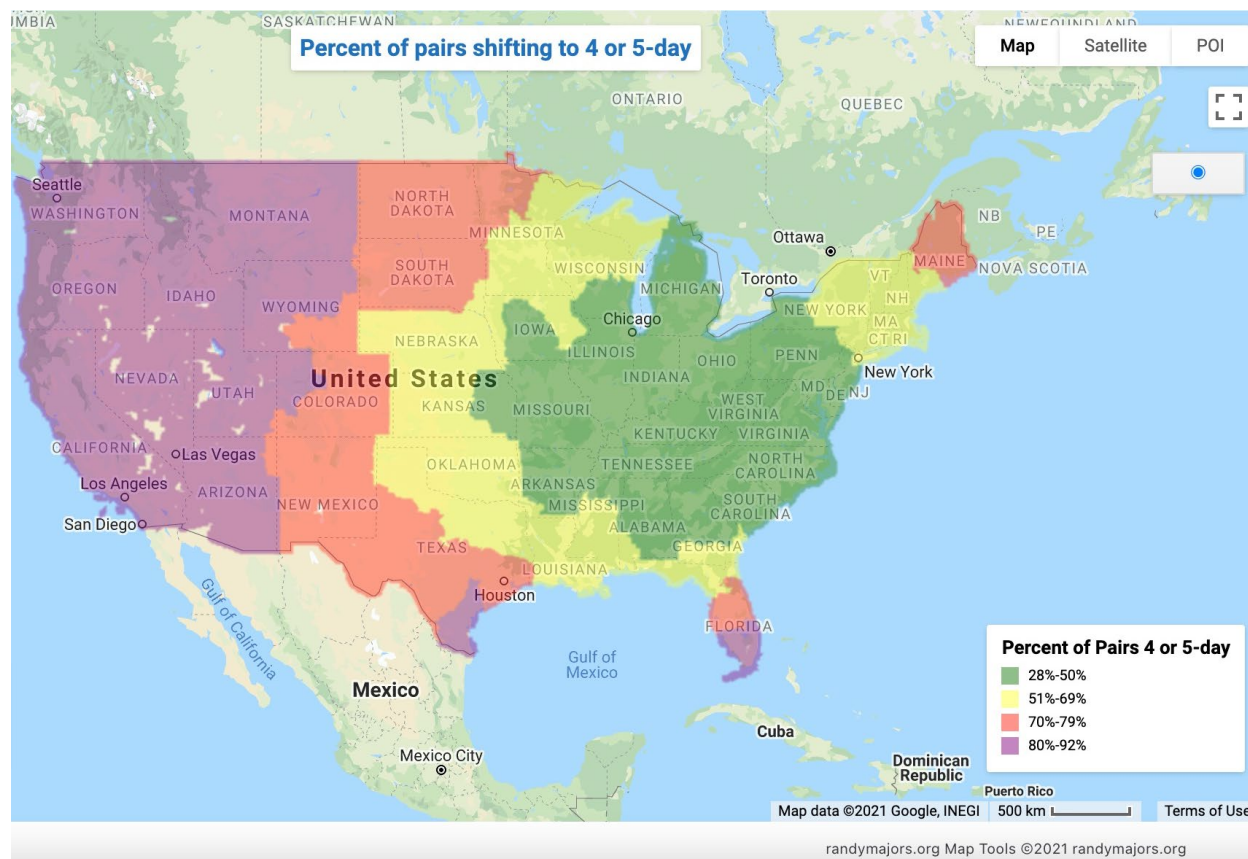
PR/USPS-T4-2. Please explain, as completely as possible, why the proposed changes will not result in a slower average speed for First-Class Mail piece, relative to the status quo.

RESPONSE:

The proposed service standards will result in a slower average speed for First-Class Mail but with greater on-time performance. Transportation will be planned around the new service standards and it will take longer to transport volumes shifting from Air to Surface.

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SH/USPS-T3-1. Please consider the following map showing the distribution of 4- and 5-day OD pairs across the contiguous U.S.²³ Please confirm that the map appears to be a reasonably accurate representation of what will occur under the Postal Service's plan, e.g., the western part of the country will see a much larger percentage of 4- and 5-day pairs than the eastern part of the country. If not confirmed, please explain.



RESPONSE:

Confirmed.

²³ The data set used to create this map was derived from USPS-LR-N2021-1-3, Excel sheet entitled "3_Zip3_OD_Pairs.xlsx," by totaling the 4 and 5-day pairs for each 3-digit zip. This data can be found on Google Drive at <https://bit.ly/3osPqT5>. The map was created using a mapping tool at [randymajors.org](https://bit.ly/3wgXkl2). For closer inspection, an interactive version of the map can be found at <https://bit.ly/3wgXkl2>.

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SH/USPS-T3-2. Please refer to Commission Report: Complaint on First-Class Mail Standards, Docket No. C2001-3, April 17, 2006, which dealt with the changes in service standards made in 2000-2001. Please refer to p. 2, section 1006, where the Commission stated the following:

Conclusions are also mixed because the record indicates that service under the adjusted standards appears to have improved for some postal patrons. However, many postal patrons in the western part of the Nation experienced a disproportionate number of service downgrades. Thus, the delivery service under the realignment resulted in a degree of unfairness and undue discrimination under section 403(c) for these patrons.

Please also refer to Commission Report, Appendix C, p. 12, section 38, where the Commission stated the following:

The Commission finds that the Complainant's assertions of undue discrimination, to the extent they involve delivery in California and other locales in the Pacific and Western areas, have merit. The Service's approach and application of the new model, given its underlying assumptions, resulted in a degree of unfairness that was clearly unintended, but nevertheless real. Geography, network design, and distances all play legitimate roles in determining service standards, but the Service's starting point — which, among other things, proceeded without public involvement and eliminated air transportation from initial determinations — exhibits an inappropriate degree of arbitrariness with respect to delivery in the areas Mr. Carlson highlights. The results, in turn, also impede the Service's ability to meet the mandate of section 101(a), which exhorts the Service "... to provide prompt, reliable, and efficient services to patrons in all areas...."

Please discuss the similarities and differences between the 2000-2001 changes in standards and changes described in the current proposal, and please explain why the differences are such that the Commission would have no reason to find that the current proposal also results in "undue discrimination" under 403(c) and impedes the Postal Service's ability to meet the mandate of section 101(a).

RESPONSE:

The changes currently before the Commission differ in key attributes from those discussed in Docket No. C2001-3. The differences, moreover, are both substantive and procedural in nature. By way of context, it bears recalling that Docket No. C2001-3 involved a series of changes first proposed in 1989, partially implemented in 1990, and later completed in 2001. It is the second stage of implementation, styled "phase two" by the Postal Service, that garnered the Complaint now cited by Mr. Hutkins.

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In phase two, the Postal Service sought to achieve a “2-Day service standard definition.” To that end, it examined Sectional Center Facilities (SCFs) and Area Distribution Centers (ADCs) to determine which ones were (a) within the home State and nearby States and (b) within reasonable reach of surface transportation. Having established the minimum transportation windows available with which to transport mail, the Postal Service then decided upon a maximum 12-hour highway drive-time range by which to determine those destinations that would become part of the 2-Day service area for any Processing Plant of origin.²⁴ The 12-hour drive time was based on computer projections.²⁵

The changes now before the Commission would likewise divert transportation from the air to the ground. They would also shift certain delivery times by one or two days. The changes now proposed, however, prove more finely gradated than the above-mentioned “phase 2,” and they are predicated on a variegated scale of drive times that better reflect the realities of mail transportation. As an illustration, the Postal Service notes that the new system would yield a two-day service standard to inter-SCF First-Class Mail if the combined drive time between the origin Processing & Distribution Center or Facility (P&DC/F), destination ADC, and destination SCF is 3 hours or less; and a three-day standard for inter-SCF First-Class Mail within the 48 contiguous states where the combined drive time between the origin P&DC/F, destination ADC, and destination SCF is more than 3 hours, but does not exceed 20 hours, and also for intra-

²⁴ Commission Report Complaint on First-Class Mail Service Standards, 2001 (“Commission Report”), Docket No. C2001-3, App’x B, p. 8.

²⁵ *Id.*

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SCF single-piece First-Class Mail if the combined drive time exceeds 3 hours and the SCF is not the origin P&DC/F. This greater degree of nuance suggests an underlying model (described at length in witness Hagenstein's testimony (USPS-T-3)) that is different from, and more sophisticated than, the computer-based projections that were found in 2001 to have produced the outcomes presented in the complaint case.

Just as important, if not more so, is the difference in procedural posture. In 2001, the Postal Service deemed itself to be implementing the second part of an initiative that the Commission had already examined. Yet in Docket No. C2001-3, the Commission found these changes to be beyond the scope of the original proposal; and this determination presumably colored its substantive findings. Thus, in its analysis of 39 U.S.C. § 101(e), and of the Postal Service's duty pursuant to that statute, the Commission opined:

Had the Service filed a new Request prior to implementing the 2000-2001 realignment, it would have had an opportunity to develop a record to support the contention that '3 days is fast enough' to satisfy the statute. As it stands, however, there is not a record to support this proposition, which is inherent in the approach the Service adopted.²⁶

This assessment, which binds the substance of the changes to the precipitousness of their implementation, informed the Commission's recommendation that "where significant volumes of First-Class Mail exist between city pairs where reliable air transportation exists, the Service give serious consideration to utilizing that transportation when it will result in more expeditious delivery"—as, in the absence of a

²⁶ *Id.* at App'x C, p. 8.

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full airing, the Postal Service was assumed to have eschewed such serious consideration.²⁷

By contrast, the proposed changes now before the Commission are precisely that: proposed changes, which the Postal Service has explained at length, for which it has provided compelling reasons, and on behalf of which it now advocates in a public proceeding. In particular, the Postal Service has shown how, given current operational, volume, and financial realities, it is appropriate to revise the service standards using objective criteria to enable more volume to move by surface transportation; this will lead to greater service reliability, and will assist the Postal Service in its efforts to create a more precise, resilient, financially sustainable network. It is these considerations that have material relevance to the question of “undue discrimination” under 403(c), and to that, flowing from it, of the Postal Service’s ability to meet the mandate of section 101(a).

As the Commission itself acknowledged in Docket No. C2001-3, “Geography, network design, and distances all play legitimate roles in determining service standards”²⁸ Indeed, transportation changes applied in an objective and neutral fashion may unavoidably yield longer delivery times for pieces traveling longer distances. Indeed, any objective operational criteria applied equally throughout the Nation can have differing impacts in different areas of the country, given the size and geographic diversity of the Nation, but it cannot be the case that the Postal Service is

²⁷ *Id.* at App’x C, p. 9.

²⁸ *Id.* at App’x X, p. 12.

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foreclosed from adopting such uniform criteria. The Postal Service therefore submits that such unintentional discrepancies in no way constitute undue or unreasonable discrimination. (As a policy matter, it should perhaps be noted that a standard of equality along all dimensions would encourage a process of levelling-down across all pairs, rather one of levelling-up where feasible).

The proposed changes, furthermore, distinguish themselves from those discussed in Docket No. C2001-3 in ways that neutralize even the appearance of undue discrimination. For one thing, the current changes have a different “starting point” from that criticized by the Commission in Docket No. C2001-3, where the Postal Service was found to have “proceeded without public involvement and eliminated air transportation from initial determinations.” The Commission’s allusion to “public involvement” served, at least in part, to admonish the Postal Service for implementing service changes without first seeking an advisory opinion; as noted above, such is not the case here. Furthermore, multiple complainants in Docket No. C2001-3 drew attention to an anomalous “pseudo ADC” arrangement, which resulted from the use of a sorting scheme assignment and from the delegation to a local official of responsibility for deciding which facility should serve as the designated ADC. As a result, some service standards (notably in California) were downgraded from 2-day service to 3-day service when, had the model been applied uniformly, these downgrades would not have occurred. The complainants asserted—and the Commission concurred—that the model had thus been deployed unevenly and discriminatorily in those areas without a reasonable basis. The Commission indicated that by providing the 2-day service

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standard to all areas involved in the “pseudo ADC” arrangement, the Postal Service could remedy this fault.²⁹ The changes currently before the commission contemplate no such “pseudo ADC” arrangements.

Thus, to the extent that the “undue discrimination” noted in Docket No. C2001-3 “impede[d] the Service’s ability to meet the mandate of section 101(a), which exhorts the Service ‘... to provide prompt, reliable, and efficient services to patrons in all areas,’”³⁰ the lack of such discrimination here means that the Postal Service’s current proposal does not infringe the mandate of section 101(a). These changes, in fact, would serve to uphold that mandate by better enabling the Postal Service to “provide prompt, reliable, and efficient services to patrons in all areas.”³¹ For, as the Postal Service has shown in its filings, the current service standards force an over-reliance on air transportation. These carriers are subject to last-minute changes based upon weather delays, network congestion, and air traffic control ground stops. The addition of one or two days to current service standards for First-Class Mail would enable the Postal Service to convey a greater volume of mail within the contiguous United States by surface transportation, thereby improving on-time reliability.

Overall, the Postal Service believes that it demonstrated how this service standard change conforms to all policies of the statute, and that this conclusion is not belied by Commission findings 15 years ago regarding a different service standard change in a fundamentally different substantive and procedural context.

²⁹ *Id.* at App’x D, p. 5-6.

³⁰ *Id.* at App’x C, p. 12.

³¹ 39 U.S.C. § 101(a).

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SH/USPS-T3-3. Has the Postal Service performed or commissioned any studies that would address issues involving the potential for unintentional geographic discrimination caused by the proposed changes? If so, please provide the results of these studies.

RESPONSE:

No studies were performed or commissioned to address unintentional geographic discrimination.

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SH/USPS-T3-4. Please refer to USPS-LR-N2021-1-3, Excel sheet entitled “3_Zip3_OD_Pairs.xlsx,” and USPS-LR-N2021-1-1, Excel spreadsheet “1_P.Mode_Mapping.xlsx.” Please provide an Excel spreadsheet that contains all of the data in the OD pair sheet with two additional columns, one for the mode data (air, surface, etc.) from the mode mapping sheet and one that shows the mode of transportation after the plan is implemented.

RESPONSE:

Please see the Excel spreadsheet filed in USPS-LR-N2021-1-19 and its non-public counterpart in USPS-LR-N2021-1-NP8.

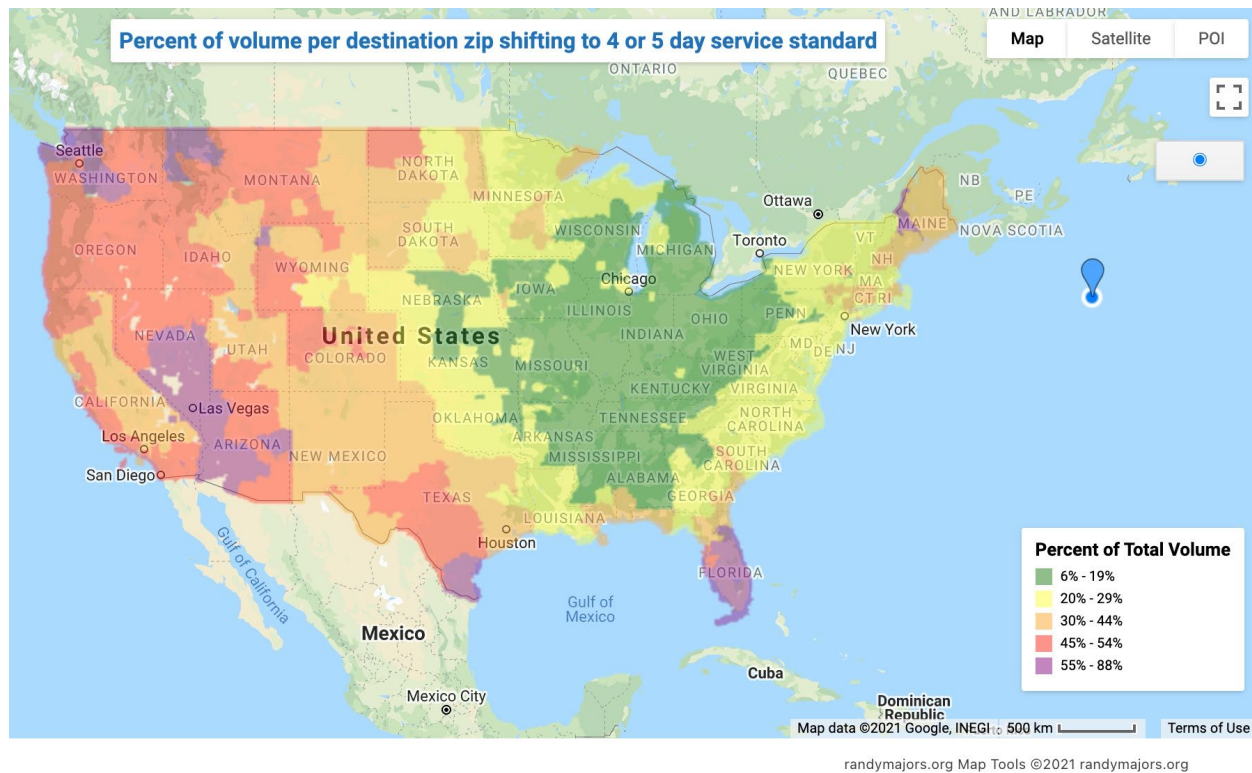
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SH/USPS-T3-5. Please provide an Excel spreadsheet that contains the following: (a) originating 3-digit prefix for the 903 OD pairs in the contiguous U.S., as presented in USPS-LR-N2021-1-3, (b) total number of pairs currently 2-day, (c) total number of pairs currently 3-day, (d) total number of 2-day pairs under proposal, (e) total number of 3-day pairs under proposal, (f) total number of 4-day pairs under proposal, (g) total number of 5-day pairs under proposal, (h) total volume for pairs currently 2-day, (i) total volume for pairs currently 3-day, (j) total volume for pairs 2-day under proposal, (k) total volume for 3-day pairs under proposal, (l) total volume for 4-day pairs under proposal, and (m) total volume for 5-day pairs under proposal.

RESPONSE:

Please see the Excel spreadsheet filed in USPS-LR-N2021-1-19.

SH/USPS-T3-6. Please consider the following map showing the percent of total volumes per destination 3-digit zip code that will be shifting to a 4- or 5-day service standard under the Postal Service’s proposal.³² Please confirm that the map appears to be a reasonably accurate representation of what will occur under the plan, e.g., recipients who live in the western part of the country (as well as portions of Florida and Maine) will see a much larger percentage of their mail volumes shifted to a 4- or 5-day service standard than those living in the eastern half. If not confirmed, please explain.



RESPONSE:

Confirmed.

³² The data set used to create this map was derived from USPS-LR-N2021-1-3, Excel sheet entitled “3_Zip3_OD_Pairs.xlsx,” by totaling the volumes for 4 and 5-day pairs for each 3-digit zip. This data can be found on Google Drive at <https://bit.ly/3v300CN>. The map was created using a mapping tool at randymajors.org. For closer inspection, an interactive version of the map can be found at <https://bit.ly/3ouLHV3>.

SH/USPS-T3-7. Please discuss why the proposed changes will not result in unfair and undue discrimination against users of the mail who live in areas where mail volumes subject to a 4 or 5-day standard will be significantly greater (in terms of percentages) than in other areas.

RESPONSE:

As the Commission acknowledged in Docket No. C2001-3, “[g]eography, network design, and distances all play legitimate roles in determining service standards”³³

Indeed, transportation changes applied in an objective and neutral fashion may unavoidably yield longer delivery times for pieces traveling longer distances. Any objective operational criteria applied equally throughout the Nation can have differing impacts in different areas of the country, given the size and geographic diversity of the Nation, but it cannot be the case that the Postal Service is foreclosed from adopting such uniform criteria. The Postal Service therefore submits that such unintentional discrepancies in no way constitute undue or unreasonable discrimination.

Here, the Postal Service’s proposed changes apply the same rules of time and distance uniformly across the entire contiguous United States. As the distance between locations increases, the time to travel between such locations likewise increase, and logically, the expected delivery results change. Higher density population centers result in a greater number of origin-destination pairs that fall within the lower service standard. It is the differences in population density and processing sites, not undue discrimination—intentional or otherwise—that cause the differences in service standards.

³³ Commission Report Complaint on First-Class Mail Service Standards, 2001 (“Commission Report”), Docket No. C2001-3, App’x B, p. 8.

The Postal Service has shown how, given current operational, volume, and financial realities, it is appropriate to revise the service standards using objective criteria to enable more volume to move by surface transportation; this will lead to greater service reliability, and will assist the Postal Service in its efforts to create a more precise, resilient, financially sustainable network. It is these considerations that have material relevance to the question of “undue discrimination” under 403(c), and to that, flowing from it, of the Postal Service’s ability to meet the mandate of section 101(a).

These changes would serve to uphold that mandate by better enabling the Postal Service to “provide prompt, reliable, and efficient services to patrons in all areas.”³⁴ For, as the Postal Service has shown in its filings, the current service standards force an over-reliance on air transportation. These carriers are subject to last-minute changes based upon weather delays, network congestion, and air traffic control ground stops. The addition of one or two days to current service standards for First-Class Mail would enable the Postal Service to convey a greater volume of mail within the contiguous United States by surface transportation, thereby improving on-time reliability.

³⁴ 39 U.S.C. § 101(a).

SH/USPS-T3-8. Has the Postal Service commissioned any technical studies by outside consulting or market research companies on service standards since 2012 (i.e., subsequent to the market research studies done for the changes reviewed in Docket No. 2012-1 concerning Network Rationalization)? If so, please share the studies and results.

RESPONSE:

I am not aware of any commissioned studies by outside consulting or market research companies on service standards since 2012.